

 $+$

6A1 VH

	6A1	Vh5	DP-73	5-51
EVQLVQSGAEVKKPGESL	EVQLVQSGAEVKKPGESL	EVQLVQSGAEVKKPGESL	EVQLVQSGAEVKKPGESL	EVQLVQSGAEVKKPGESL
<u>TI</u> SCCKSGSYNFF	<u>TI</u> SCCKSGSYNFF	<u>KI</u> SCCKSGSYST	<u>KI</u> SCCKSGSYST	<u>KI</u> SCCKSGSYST
WVRQMPGKGLEWMG	WVRQMPGKGLEWMG	WVRQMPGKGLEWMG	WVRQMPGKGLEWMG	WVRQMPGKGLEWMG
NYWIG	NYWIG	SYWIG	SYWIG	SYWIG

6A1	<u>TYPTDSDTRYSPSFQG</u>	<u>QVTISVDKSI</u> STAYLQWSSLKASDTAMYYCAR	<u>SI</u>
Vh5	DP-73	5-51	QVTISADKSISTAYLQWSSLKASDTAMYYCAR

[illegible]

6A1 VL

	SSELTQDPAVSVALGQTVRITC	<u>OGLSLRSYYAS</u>	<u>WYQQKPGQAPLVLY</u>	<u>GK</u>
6A1	SSELTQDPAVSVALGQTVRITC	<u>OGLSLRSYYAS</u>	<u>WYQQKPGQAPLVLY</u>	<u>GK</u>
Vlambda3	DPL16	31		

6A1	NKRPS	GIPDRFSGSSGNTASLTITGAQAEADYYC	HSRDSSGNHVL
v1ambda3	DPL16	31	HSRDSSGNHVL

	GGTKLTVLGA	110	SEQ	ID	NO:
6A1					109
v1ambda3	DPL16	31	GGTKLTVL..	JL3	SEQ ID NO: 151

FIG. 1B

7A2 VH		
7A2	GVQLVQSGAEVKKPQESL	50
Vh5_DP-73__5-51__	<u>T</u> ISCKGSGY <u>NFF</u> <u>NYWIG</u> WVRQMPGKGLEWMG <u>I</u>	
	<u>EVQLVQSGAEVKKPQESL</u> <u>K</u> ISCKGSGY <u>SFT</u> <u>SYWIG</u> WVRQMPGKGLEWMG <u>I</u>	
7A2	IYPTDSDTRYSPSFQ	100
Vh5_DP-73__5-51__	<u>B</u> VTISVDKSIStAYLQWSSLKASDTAMYYCAR <u>SI</u>	
	<u>IYPGDSDTRYSPSFQ</u> <u>Q</u> VTIS <u>A</u> DKSISStAYLQWSSLKASDTAMYYCAR ..	
7A2	RYCPGGRCYSGYYGMDV	
Vh5_DP-73__5-51__	WGQGTMTVTVSS 128 SEQ ID NO:110	
 WGQGTMTVTVSS JH3 SEQ ID NO:144	
7A2 VL		
7A2	SSELTQDPAVSVALGQTVRITC	50
Vlambda3_DPL16__31__	<u>Q</u> GDSLRSYYTN <u>WFQ</u> QKPQOAP <u>LLVVY</u> <u>AK</u>	
	<u>SSELTQDPAVSVALGQTVRITC</u> <u>Q</u> GDSLRSYYAS <u>WY</u> QQKPQOAP <u>VLVIY</u> <u>GK</u>	
7A2	<u>NKRPS</u> GIPDRFSGSSSGNTASLTITGAQAEDEADYYC	100
Vlambda3_DPL16__31__	<u>NNRPS</u> GIPDRFSGSSSGNTASLTITGAQAEDEADYYC <u>NSRDS</u> SGNHVV FG	
7A2	GGTKLTVLGA 110 SEQ ID NO:111	
Vlambda3_DPL16__31__	GGTKLTVL.. JL3 SEQ ID NO:151	

FIG. 1C

7A4 VH

7A4 EVQLVQSGAEVKKPGESLTIISCKGSGYNFFI 50
Vh5_DP-73__5-51_ WVRQMPGKDLIEWMG I
EVQLVQSGAEVKKPGESLKISCKGSGYSFTI WVRQMPGKGLEWMG I
7A4 IYPTDSDTRYSPSFOGQVTISVDKSIStAYLQWSSLKASDTAMYYCARSI 100
Vh5_DP-73__5-51_ IYPGDSDTRYSPSFOGQVTISAADKSIStAYLQWSSLKASDTAMYYCAR ..
7A4 RYCPGGRCYSGYYGMDVWGQGTMTVTVSS 128 SEQ ID NO:112
Vh5_DP-73__5-51_ WGQGTMTVTVSS JH3 SEQ ID NO:144
.....

7A4 V

7A4 SSELTDQDPAVSVALGQTVRITC RGDSLRNYYAS WYQQKPGQAPVLVIY GK 50
Vlambda3_DPL16__31_ SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK
7A4 NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSSGNHMV FG 100
Vlambda3-DPL16-31- NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSSGNHVV FG
7A4 GGTKLTVLGA 110 SEQ ID NO: 113
Vlambda3-DPL16-31- GGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1D

7A5 VH

7A5 GVQLVESGAEVKKPGESLTISCKGSGYNFF NXWIG WVRQMPGKGLEWMG I 50
 Vh5_DP-73__5-51 EVQLVQSgaeVKKPGESLKISCKGSGYSFT SYWIG WVRQMPGKGLEWMG I

7A5 IYPTDSDTRYSPSFOG QVTISVDKSISTAYLQWSSLKASDTAMYCAR SI 100
 Vh5_DP-73__5-51 IYPGDS TRYSPSFOG QVTISADKSISTAYLQWSSLKASDTAMYCAR ..

7A5 RYCPGGRCYSGYYGMDV WGRGTLVTVSS 128 SEQ ID NO:114
 Vh5_DP-73__5-51 WGRGTLVTVSS JH2 SEQ ID NO:145

7A5 VL

7A5 SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK 50
 Vlambda3_DPL16__31_ SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK

7A5 NNRPS GIPDRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSSGNHVV FG 100
 Vlambda3_DPL16__31_ NNRPS GIPDRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSSGNHVV FG

7A5 GGTKLTVLGA 110 SEQ ID NO: 115
 Vlambda3_DPL16__31_ GGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1E

7A6 VH

7A6 EVQLVQSGAEVKKPGESL**T**ISCKGSGY**NFF** **NYWIG** WVRQMPGKGLEWMG **I** 50
Vh5_DP-73__5-51__ EVQLVQSGAEVKKPGESL**K**ISCKGSGY**SFT** **SYWIG** WVRQMPGKGLEWMG **I**

7A6 **IYPTDSDTRYSPSFOG** QVTIS**VD**KSISTAYLQWSSLKASDTAMYCAR **SI** 100
Vh5_DP-73__5-51__ **IYPGDSDTRYSPSFOG** QVTIS**AD**KSISTAYLQWSSLKASDTAMYCAR ..

7A6 **RYCPGGRCYSGYYGMDV** WGQGLVTVSS 128 SEQ ID NO:116
Vh5_DP-73__5-51__ WGQGLVTVSS JH5 SEQ ID NO:146

7A6 VL

7A6 SSELTDQDPAVSVALGQTVRITC **QGD**SLRSYYTN **WFQ**QKPGQAP**LLV**VY **AK** 50
Vlambda3_DPL16__31__ SSELTDQDPAVSVALGQTVRITC **QGD**SLRSYYAS **WYQ**QKPGQAP**VL**VY **GK**

7A6 **NKRPS** GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRD**SSGNHVV FG 100
Vlambda3_DPL16__31__ **NNRPS** GIPDRFSGSSSGNTASLTITGAQAEDADYYC **NSRD**SSGNHVV FG

7A6 GGTKLTVL 108 SEQ ID NO:117
Vlambda3_DPL16__31__ GGTKLTVL JL3 SEQ ID NO:151

FIG. 1F

8A1 VH

8A1 EVQLVQSGAEVKKPGESLTIISCKGPGY~~NFF~~ NYWIG WVRQMPGKGLEWMG I 50
Vh5_DP-73__5-51_
EVQLVQSGAEVKKPGESLKISCKGSGY~~SFT~~ SYWIG WVRMPGXGLEWMG I

8A1 IYPTDSDTRYSPSFQG QVTISV~~VD~~KSISTAYLQWSSLKASDTAMYCAR SI 100
Vh5_DP-73__5-51_
IYPGDSDTRYSPSFQG QVTIS~~AD~~KSISTAYLQWSSLKASDTAMYCAR ..

8A1 RYCPGGRCYSGYYGMDV WGQGTMTVSS 128 SEQ ID NO:118
Vh5_DP-73__5-51_
..... WGQGTMTVSS JH3 SEQ ID NO:144

8A1 VL

8A1 SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK 50
Vlambda3_DPL16__31_
SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK

8A1 NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNHVV FG 100
Vlambda3_DPL16__31_
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNHVV FG

8A1 GGTKLTVLGA 110 SEQ ID NO:119
Vlambda3_DPL16__31_
GGTKLTVL.. JL3 SEQ ID NO:151



FIG. 1G

9A2 VH

9A2 Vh1_DP-14__1-18_ QVQLVQSGAEV**R**KPGASVKV**S**CK**T**SGYT**F**R **N**YD**I**N WVRQAPGQGLEW**M**G **R** 50
 QVQLVQSGAEV**K**KPGASVKV**S**CK**A**SGYT**F**T **S**Y**G**I**S** WVRQAPGQGLEW**M**G **W**

9A2 Vh1_DP-14__1-18_ **I**SGHYGNTDHA**K**FO**G** **R**F**T**M**T**K**D**TSTSTAYMELR**S**L**T**F**D**DDTAVYYC**A**R **S**Q 100
ISAYNGNTN**Y**AQ**K**LO**G** **R**V**T**M**T****T**DTSTSTAYMELR**S**L**R**SDDDTAVYYC**A**R . .

9A2 Vh1_DP-14__1-18_ **W**N**V**D**Y** WGRGTLVTVSS 116 SEQ ID NO:120
 WGRGTLVTVSS JH2 SEQ ID NO:147

9A2 VL

9A2 Vlambda6_6a NFMLTQPHSVSESPGKTVT**I**SC **T**R**S**SG**S**I**A**S**N**Y**V**Q **W**YQ**Q**R**P**G**S**S**P**T**T**V**I****F** 50
 NFMLTQPHSVSESPGKTVT**I**SC **T**R**S**SG**S**I**A**S**N**Y**V**Q **W**YQ**Q**R**P**G**S**S**P**T**T**V**I****Y**

9A2 Vlambda6_6a **E**D**N**R**R**R**P**S GVPDRFSGSID**T**SSNSASLTISGLKTEDEAD**Y**YC **Q**S**F**D**S**T**N**L**V** 100
ED**N**Q**R**P**S** GVPDRFSGSID**S**SSNSASLTISGLKTEDEAD**Y**YC **Q**S**Y**D**S**S**N**L**V**

9A2 Vlambda6_6a **V** FGGG**T**K**L**T**V**L**G**A 113 SEQ ID NO:121
V FGGG**T**K**L**T**V**L. . J**L**2/J**L**3 SEQ ID NO:152

FIG.1H

11A1 VH

11A1 Vh3_DP-50__3-33_ EVQLVESGGGVQPGRSLRLSCAASGFTFS DFAMH WVRQIPGKGLEWLS G 50
QVQLVESGGGVQPGRSLRLSCAASGFTFS SYGMH WVRQAPGKGLEWVA V

11A1 Vh3_DP-50__3-33_ LRHDGSTAYYAGSVKG RFTISRDNSRNTVYLQMNSLRAEDTATYYCVT GS 100
IWYDGSNKYYADSVKG RFTISRDNKNTLYLQMNSLRAEDTAVYYCAR.. *

11A1 Vh3_DP-50__3-33_ GSSGPHAFPV WGKGTLVTSS 121 SEQ ID NO:122
 WGQGT~~L~~VTSS JH1/JH4/JH5 SEQ ID NO:148

*Vernier residue

11A1 VL

11A1 Vlambdal_DPL2__1c_ SYVLTQPPSASGTPGQRTISC SGSNSNIGTYTVN WFQQLPGTAPKLLIY 50
QSVLTQPPSASGTPGQRTISC SGSSSNIGSNTVN WYQQLPGTAPKLLIY

11A1 Vlambdal_DPL2__1c_ SNNQRPS GVPDRFSGSKSGTSASLAISGLQSEDEADYYC AAWDDSLNGPV 100
SNNQRPS GVPDRFSGSKSGTSASLAISGLQSEDEADYYC AAWDDSLNGPV

11A1 Vlambdal_DPL2__1c_ FGGGTKVTVLGA 112 SEQ ID NO:123
 FGTGTKVTVL... JL1 SEQ ID NO:154

FIG. 11

11A2 VH

11A2 EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A 50
 Vh3_DP-47__3-23_ EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A

11A2 ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK GM 100
 Vh3_DP-47__3-23_ ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK ..

11A2 GYYGSGGYYPDDAFDV WGQGTMTVSS 127 SEQ ID NO:124
 Vh3_DP-47__3-23_ WGQGTMTVSS JH3 SEQ ID NO:149

11A2 VL

11A2 SSELTDQDPDVSMALGQTVTTISC RGDSLKRIFYAS WYHQQKPGQAPVLVFY GK 50
 Vlambda3-DPL16-31- SSELTDQDPAVSVALGQTVRTTC QGD SLRSYYAS WYQKPGQAPVLVIY GK

11A2 ENRPS GIPDRFSGSDSGDTASLTITGAQAEDEGDYYC HTQDTSARQYV FG 100
 Vlambda3-DPL16-31- NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADYYC NSRDSSGNHVV FG

11A2 SGTKVTVLGA 110 SEQ ID NO:125
 Vlambda3-DPL16-31- TGTKVTVL.. JL1 SEQ ID NO:153

FIG.1J

11A3 VH

Query Vh1_DP-14__1-18_ EVQLVQSGAEVKKPGASVKVSCKASGY**S**FT **NYGLN** WVRQAPGQGLEWMG **W** 50
QVQLVQSGAEVKKPGASVKVSCKASGY**T**FT **SYGIS** WVRQAPGQGLEWMG **W**

Query Vh1_DP-14__1-18_ **ISPYTG**YTN**YAOKFOG** RVTMTTD**K**STSTAYM**DL**RLSLRSDDTAVYYCAR **EL** 100
ISAYNGTNT**YAOKLQG** RVTMTTD**T**STSTAYM**EL**RLSLRSDDTAVYYCAR ..

Query Vh1_DP-14__1-18_ **FSHCTG**GSCYP**FDS** WGRGTLVTVSS 125 SEQ ID NO:126
 WGRGTLVTVSS JH2 SEQ ID NO:147

11A3 VL

Query Vlambda3_DPL16__31- SSELTDQDPAVSVALGQTVRITC **QGD**SLRN**YYAS** **QGD**SLRN**YYAS** WYQQKPGQAP**LLV****MF** **GK** 50
 SSELTDQDPAVSVALGQTVRITC **QGD**SLRS**YYAS** **QGD**SLRS**YYAS** WYQQKPGQAP**V****LV****IY** **GK**

Query Vlambda3_DPL16__31- **NNR**PS **EIP**GRFSGSSSGNTASLTITGAQAEDEADYYC **NSR**DRNS**HOWV** FG 100
NNRPS **GIP**DRFSGSSSGNTASLTITGAQAEDEADYYC **NSR**DSSG**NHVV** FG

Query Vlambda3_DPL16__31- GGTKLTVLGA 110 SEQ ID NO:127
 GGTKLTVL.. JL3 SEQ ID NO:151

FIG. 1K

11A4 VH

11A4
Vh3_DP-47__3-23_ 50
EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A
EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGKGLEWVS A
11A4
Vh3_DP-47__3-23_ 100
ISGGGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAS SP
ISGGGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK *
11A4
Vh3_DP-47__3-23_ 121 SEQ ID NO:128
YSSRWYSFDP WGQGTMTVTVSS
..... WGQGTMTVTVSS JH3 SEQ ID NO:149

* Vernier residue

11A4 VL

11A4
Vlambda3_DPL23__3r_ 50
SYELTQPPSVSVSPGQTATITC SGDDLGNKYVS WYQQKPGQSPVLVIY QD
SYELTQPPSVSVSPGQTASITC SGDKLGDKYAC WYQQKPGQSPVLVIY QD
11A4
Vlambda3_DPL23__3r_ 100
TKRPS GIPERFSGSNSGNIATLTISGTQAVDEADYYC QVWDTGTVV FGCG
SKRPS GIPERFSGSNSGNTATLTISGTQAMDEADYYC QAWDSSTA FGCG
11A4
Vlambda3_DPL23__3r_ 108 SEQ ID NO:129
TKLTVLGA
TKLTVL.. JL3 SEQ ID NO:155

FIG.1L

11A5 VH

Query
Vh1_DP-14__1-18_ 50
QVQLVQSGAEVKKPGASVKVCKASGYSFT NYGLN WVRQAPGQGLEWMG W
QVQLVQSGAEVKKPGASVKVCKASGYTFT SYGIS WVROAPGQGLEWMG W

Query 100
Vh1_DP-14__1-18_
ISPYTGYTNYAOKFQG RVTMTTDDKSTSTAYMDLRLSLRSDDDTAVYYCAR EI
ISAYNGNTNYAQKLQG RVTMTTDDTSTSTAYMELRLSLRSDDDTAVYYCAR ..

Query
Vh1_DP-14__1-18_
FSHCTGGSCYPFDS WGKGTLVTVSS 125 SEQ ID NO:130
..... WGQGTLVTVSS JH1 SEQ ID NO:145

11A5 VL

Query 50
Vlambda3_DPL16__31_
SSELTQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK
SSELTQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLVIY GK

Query 100
Vlambda3_DPL16__31_
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNHHWV F
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNH... F

Query
Vlambda3_DPL16__31_
QGGGTKVTVLGA 111 SEQ ID NO:131
GGGTKLTVL... JL3 SEQ ID NO:151

FIG.1M

11A11 VH

11A11 QVQLVESGGGLVKPGGSLRLSCAASGFTFS SHTMN WVRQAQKGLEWVS S 50
 Vh3_DP-77__3-21_ EVQLVESGGGLVKPGGSLRLSCAASGFTFS SHTMN WVRQAPKGLEWVS S

11A11 ISGSGRYIYYSDSVKG RFTISRDAAKNSLYLQMNNLRAEDTAVYYCTR AK 100
 Vh3_DP-77__3-21_ ISSSSYIYYADSVKG RFTISRDNAAKNSLYLQMNSLRAEDTAVYYCAR ..

11A11 FGDYLFDS WGQGTLVTVSS 119 SEQ ID NO:132
 Vh3_DP-77__3-21_ WGQGTLVTVSS JH1/JH4/JH5 SEQ ID NO:150

11A11 VL

11A11 NFMLTQPHSVSQSPGKTVTISC TRSSGRIASNFVQ WYQORPGSAPTTVIY 50
 Vlambda6_6a NFMLTQPHSVSESPGKTVTISC TRSSGSIASNYVQ WYQORPGSSPTTVIY

11A11 EDNRRPS GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDARYQV 100
 Vlambda6_6a EDNQRPS GVPDRFSGSIDSSSNSASLTISGLKTEDEADYYC QSYDSSN..

11A11 FGTGTKVTVLGA 112 SEQ ID NO:133
 Vlambda6_6a FGTGTXVTVL.. JL1 SEQ ID NO:156

FIG. 1N

11A1 2 VH

11A12 EVQLLESGGGLVQPGGSLRLSCAASGFTVS SYAMS WVRQAPGKLEWVS A 50

Vh3_DP-47__3-23_ EVQLLESGGGLVQPGGSLRLSCAASGFTFS SYAMS WVRQAPGXGLEWVS A *

11A12 ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAR SP 100

Vh3_DP-47__3-23_ ISGSGGSTYYADSVKG RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAK ..

11A12 VPPWADWYFDY WGRGTMVTVSS 123 SEQ ID NO:134

Vh3_DP-47__3-23_ WGQGTMTVTVSS JH3 SEQ ID NO:149

* Vernier residue

11A12 VL

11A12 QAVLTQPSVSGAPGQRTVISC TGSRSNFGAGYDVH WYQQFPGTAPKLLI 50

Vlambdal_DPL8__1e_ QSVVTQPPSVSGAPGQRTVISC TGSSSNIGAGYDVH WYQQLPGTAPKLLI

11A12 Y GNTNRP GVPDRFSGSRSGTSASLAITGLQAEDEADYYC QSYDSNLSGS 100

Vlambdal_DPL8__1e_ Y GNSNRP GVPDRFSGSKSGTSASLAITGLQAEDEADYYC QSYDSSLG.

Query V FGSGTKVTVLGA 113 SEQ ID NO:135

Vlambdal_DPL8__1e_ . FGSGTKVTVL.. JL1 SEQ ID NO:157

FIG. 10

12A1 VH

12A1 EVQLVQSGAEVKKPGASVKVSCKASGYSFT NYGLN WVRQAPGQGLEWMG W 50
 Vh1_DP-14__1-18_
 QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYAMS WVRQAPGQGLEWMG W

12A1 ISPYTGYTNYAOKFOG RVTMTTDKSTSTAYMDLRSLRSDDTTAVYYCAR EI 100
 Vh1_DP-14__1-18_
ISAYNGNTNYAOKLOG RVTMTTDTSTSTAYMELRSLRSDDTTAVYYCAR ..

12A1 FSHCTGGSCYPFDS WGKGTLVTVSS 125 SEQ ID NO:136
 Vh1_DP-14__1-18_
 WGQGTMVTVSS JH1 SEQ ID NO:147

12A1 VL

12A1 SSELTDQDPAVSVALGQTVRITC QGDSLRNYYAS WYQQKPGQAPVLLVY SK 50
 Vlambda3_DPL6__31_
 SSELTDQDPAVSVALGQTVRITC QGDSLRSYYAS WYQQKPGQAPVLLVY GK

12A1 NSRPS GVPDRFGSSSGTTASLTITSGAQAEDEADYYC NSRDTSGDLRWV F 50
 Vlambda3_DPL6__31_
NNRPS GIPDRFGSSSGNTASLTITGAQAEDEADYYC NSRDSSGNH... F 100

GGGTKLTVLGA 111 SEQ ID NO: 137
 GGGTKLTVL.. JL3 SEQ ID NO: 151

FIG. 1P

11A7 VH

11A7
Vh1_DP-14__1-18_ 50
EVQLVQSGAEVKKPGASVKVSKASGY**S**FT **NYGLD** WVRQAPGQGLEWMG **W**
QVQLVQSGAEVKKPGASVKVSKASGY**L**FT **SYGIA** WVRQAPGQGLEWMG **W**

11A7
Vh1_DP-14__1-18_ 100
ISPYTGYTNYAQKFQG RVTMTTDD**K**STSTAYMD**L**RLSLRSDDTAVYYCAR **EI**
ISAYNGNTNYAQKLQG RVTMTTDD**T**STSTAYM**E**LRLSLRSDDTAVYYCAR . .

11A7
Vh1_DP-14__1-18_ 50
FSHCTGGSCYPFDS WGRGT**M**VTVSS 125 SEQ ID NO:136
..... WGRGT**L**VTVSS JH2 SEQ ID NO:147

11A7 VL

11A7
Vlambda3_DPL16__31_ 50
SSELTQDPAVSVALGQTVRITC **QGD**SLRSYYAS WYQQKPGQAPVLVIY **GK**
SSELTQDPAVSVALGQTVRITC **QGD**SLRSYYAS WYQQKPGQAPVLVIY **GK**

11A7
Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSR**DSSSGNHRNWV
NNRPS IPDRFSGSSSGNTASLTITGAQAEDEADYYC **NSR**DSSSGNH....

11A7
Vlambda3_DPL16__31_ 112 SEQ ID NO:137
FGGGTK**V**VLGA JL3 SEQ ID NO: 151
FGGGTK**L**TVL..

FIG.1Q

12A2 VH

12A2 EVQLVQSGAEVKKPGASVKVSCKASGYSTFT NYGLN WVRQAPGQGLEWMG 50
Vh1_DP-14 1__18_ QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYGIS WVRQAPGQGLEWMG W

12A2 ISPYTGYTNYAOKFQG RVTMTTDKSTSTAYMDLRLSLRSDDDTAVYYCAR EI 100
Vh1_DP-14 1__18_ ISAYNGNTNYAOKLQG RVTMTTDTSTSTAYME LRLSLRSDDDTAVYYCAR ..

12A2 FSHCTGGSCYPFDS WGQGLVTVSS 125 SEQ ID NO:138
Vh1_DP-14 1__18_ WGQGLVTVSS JH1 SEQ ID NO:147

12A2 VL

12A2 SSELTDQDPAVSVALGQTVRITC QGDSLRLNYIAS WYQQKPGQAPLLVMF GK 50
Vlambda3_DPL16__31_ SSELTDQDPAVSVALGQTVRITC QGDSLRLSYIAS WYQQKPGQAPVLVIY GK

12A2 NNRPS EIPGRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSNSHQWV FG 100
Vlambda3_DPL16__31_ NNRPS GIPDRFSGSSSGNTASLTITGAQAEDAADYYC NSRDSNGNH.. FG

12A2 GGTKLTVLGA 110 SEQ ID NO:139
Vlambda3_DPL16__31_ GGTKLTVL.. JL3 SEQID NO:151

FIG. 1R

12A3 VH

12A3
 Vh1_DP-14__1-18_ 50
 QVQLVQSGAEVKKPGASVKVCKASGYSFT NYGLN WVRQAPGQGLEWMG W
 QVQLVQSGAEVKKPGASVKVCKASGYTFT SYGIS WVRQAPGQGLEWMG W
 12A3
 Vh1_DP-14__1-18_ 100
ISPYTGYTNYAQKFQ RVTMTSDKSTSTAYMDLRLSLRSDDTAIYYCAR EL
ISAYNGTNYAQKLQ RVTMTTDTSTSTAYMELRLSLRSDDTAVYYCAR ..
 12A3
 Vh1_DP-14__1-18_ 50
FSHCSGGSCYPFDY WGQGTLVTVSS 125 SEQ ID NO:140
 WGQGTLVTVSS JH1 SEQ ID NO:147

12A3 VL

12A3
 Vlambda3_DPL16__31_ 50
 SSELTDQDPAVSVALGQTVRITC QGDSLRSYAS WYQQKPGQAPLLVIIY GR
 SSELTDQDPAVSVALGQTVRITC QGDSLRSYAS WYQQKPGQAPVLVIY GK
 12A3
 Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSTNHGNWV
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDADYYC NSRDSSGNH....
 12A3
 Vlambda3_DPL16__31_ 50
 FGGGTQLTVLSA 112 SEQ ID NO:141
 FGGGTQLTVL.. JL7 SEQID NO:157

FIG. 1S

12A4 VH

12A4
Vh1_DP-14__1-18_ 50
QVQLVQSGAEVKKPGASVKVCKASGY**S**FT **NYGLN** WVRQAPGQGLEWMG **W**
QVQLVQSGAEVKKPGASVKVCKASGY**T**FT **SYGIA** WVRQAPGQGLEWMG **W**

12A4
Vh1_DP-14__1-18_ 100
ISPYTGYTN**YAQ**K**FQ**G RVTMT**TDK**STSTAYM**DL**RLSRSDDDTAVYCAR **EI**
ISAYNGNTN**YAQ**K**LQ**G RVTMT**TD****T**STSTAYM**EL**RLSRSDDDTAVYCAR ..

12A4
Vh1_DP-14__1-18_
FSHCTGGSCYP**FD**S WGRGT**M**VTVSS 125 SEQ ID NO:142
..... WGRGT**L**VTVSS JH2 SEQ ID NO:146

12A4 VL

12A4
Vlambda3_DPL16__31_ 50
SSELTQDPAVSVALGQTVRITC **QGD**SLRSY**YAS** WYQQKPGQAPVLVIY **GK**
SSELTQDPAVSVALGQTVRITC **QGD**SLRSY**YAS** WYQQKPGQAPVLVIY **GK**

12A4
Vlambda3_DPL16__31_ 100
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADY**YC** **NSRD**SSGNL**NWV** F
NNRPS GIPDRFSGSSSGNTASLTITGAQAEDEADY**YC** **NSRD**SSGNH**...** F

12A4
Vlambda3_DPL16__31_
GGGTQLTVLSA 111 SEQ ID NO:143
GGGTQLTVL.. JL7 SEQ ID NO:157

FIG. 2A

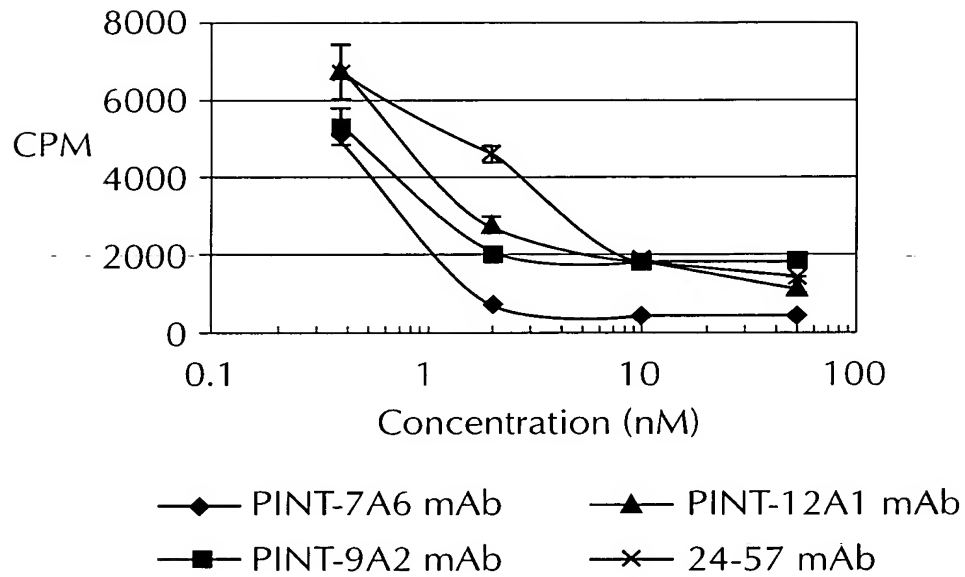
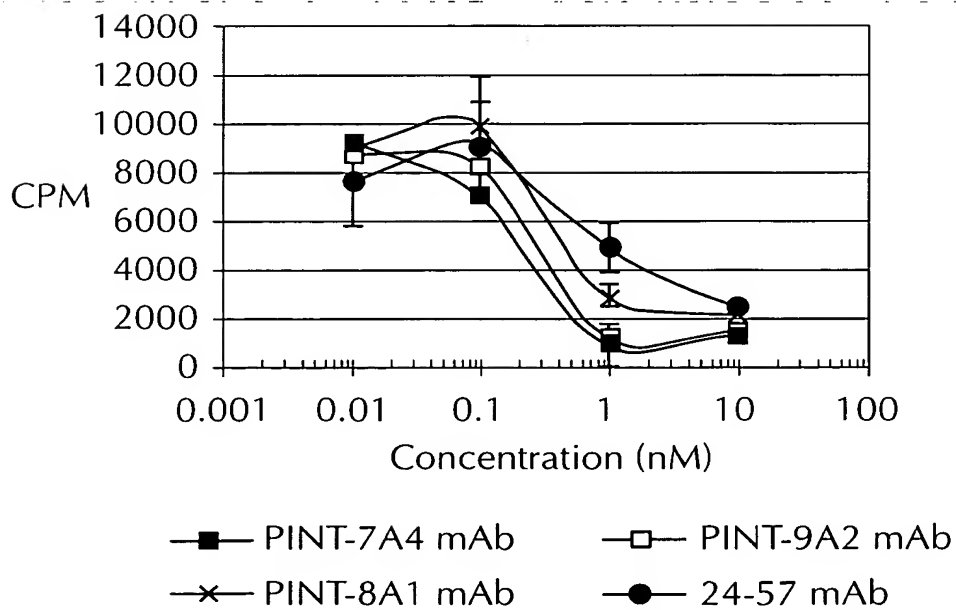


FIG. 2B



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FIG. 3

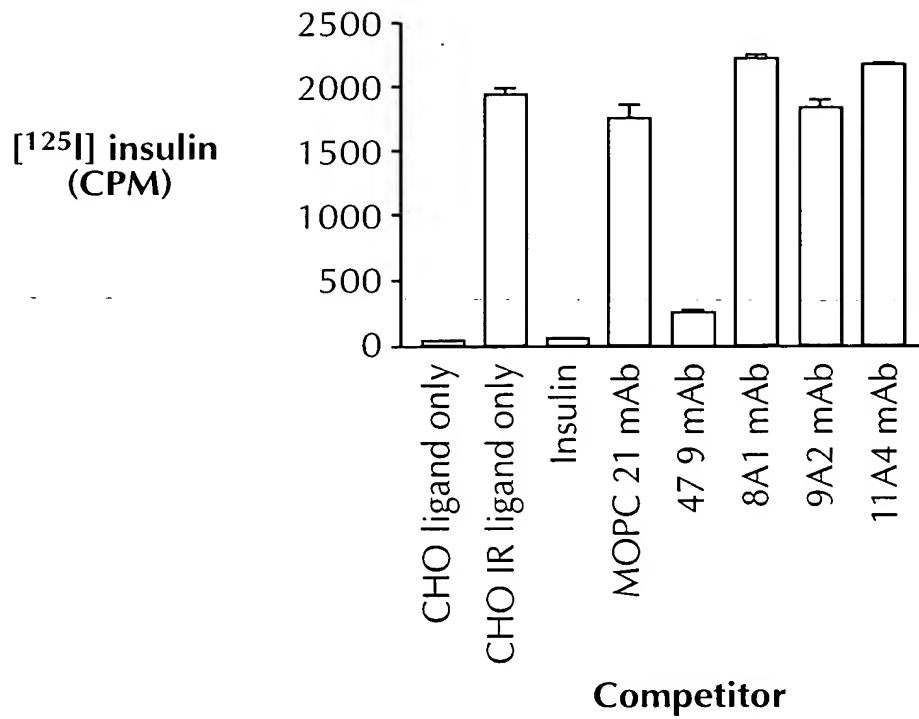
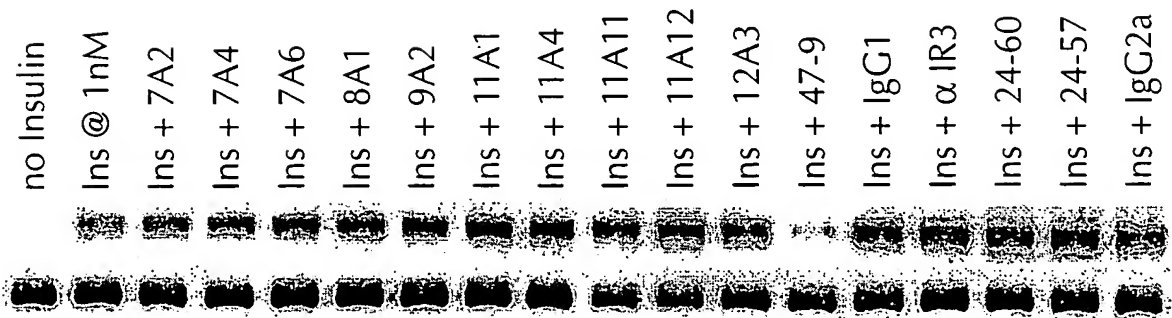


FIG. 4



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FIG. 5

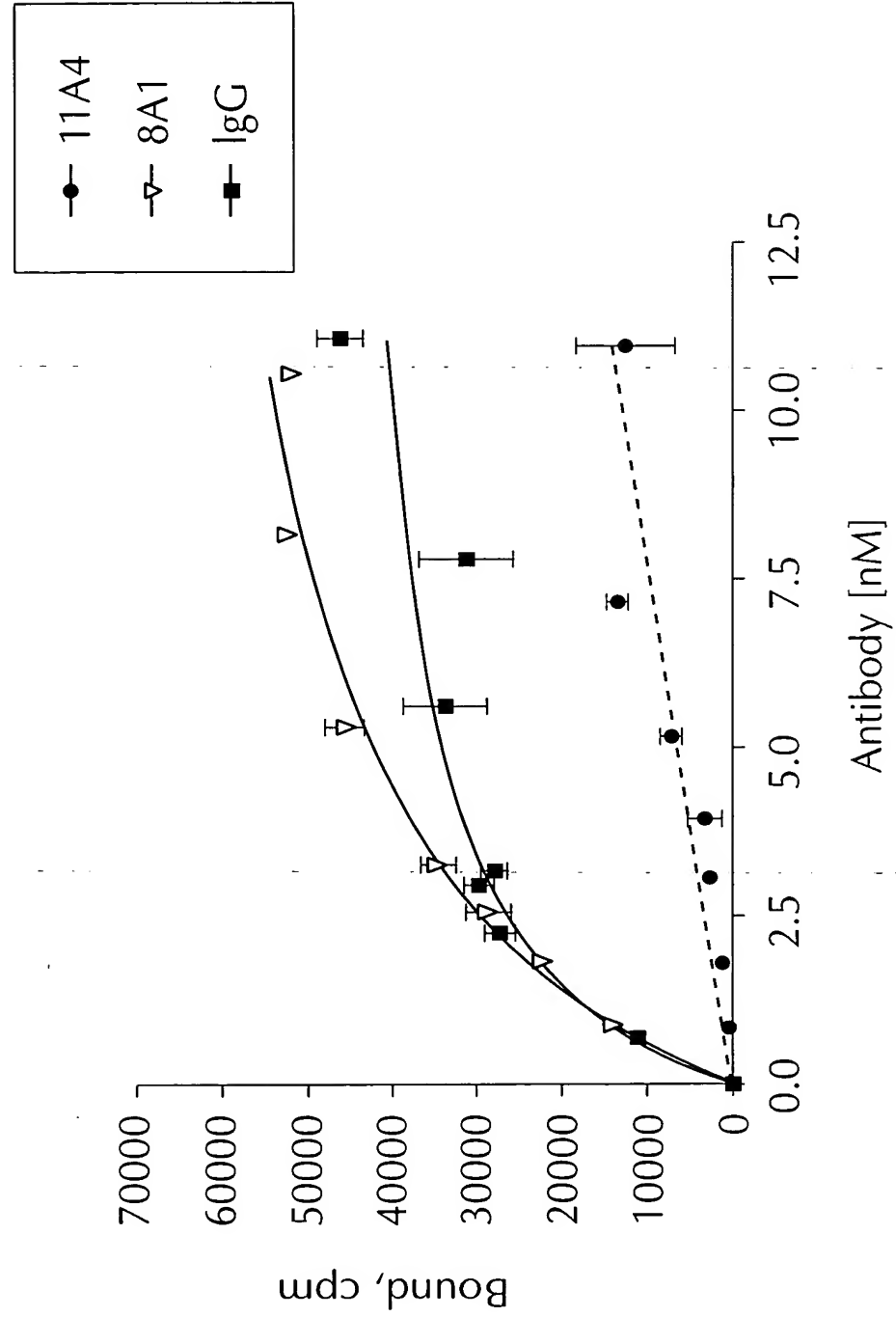


FIG. 6A

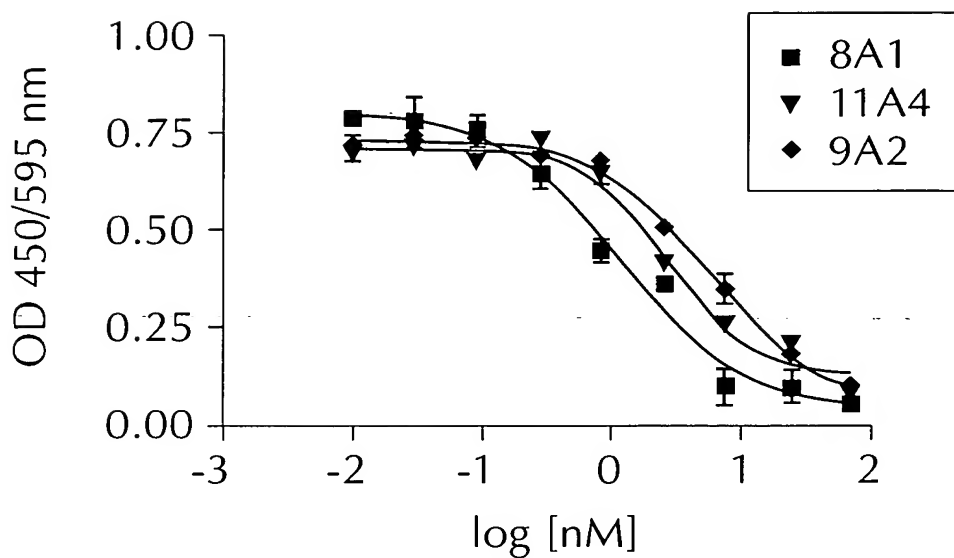


FIG. 6B

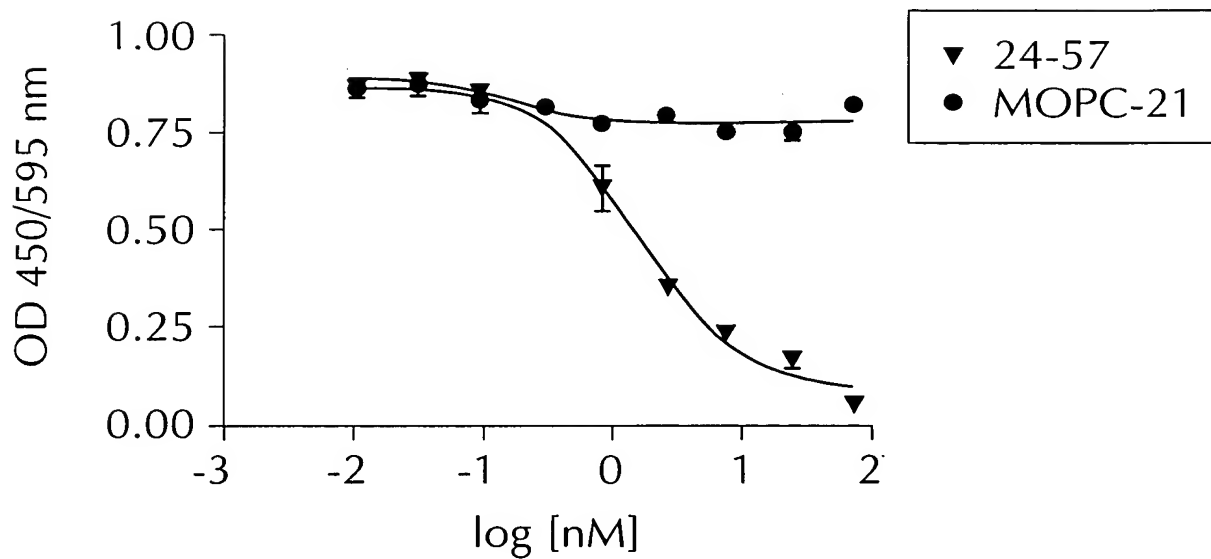


FIG. 7

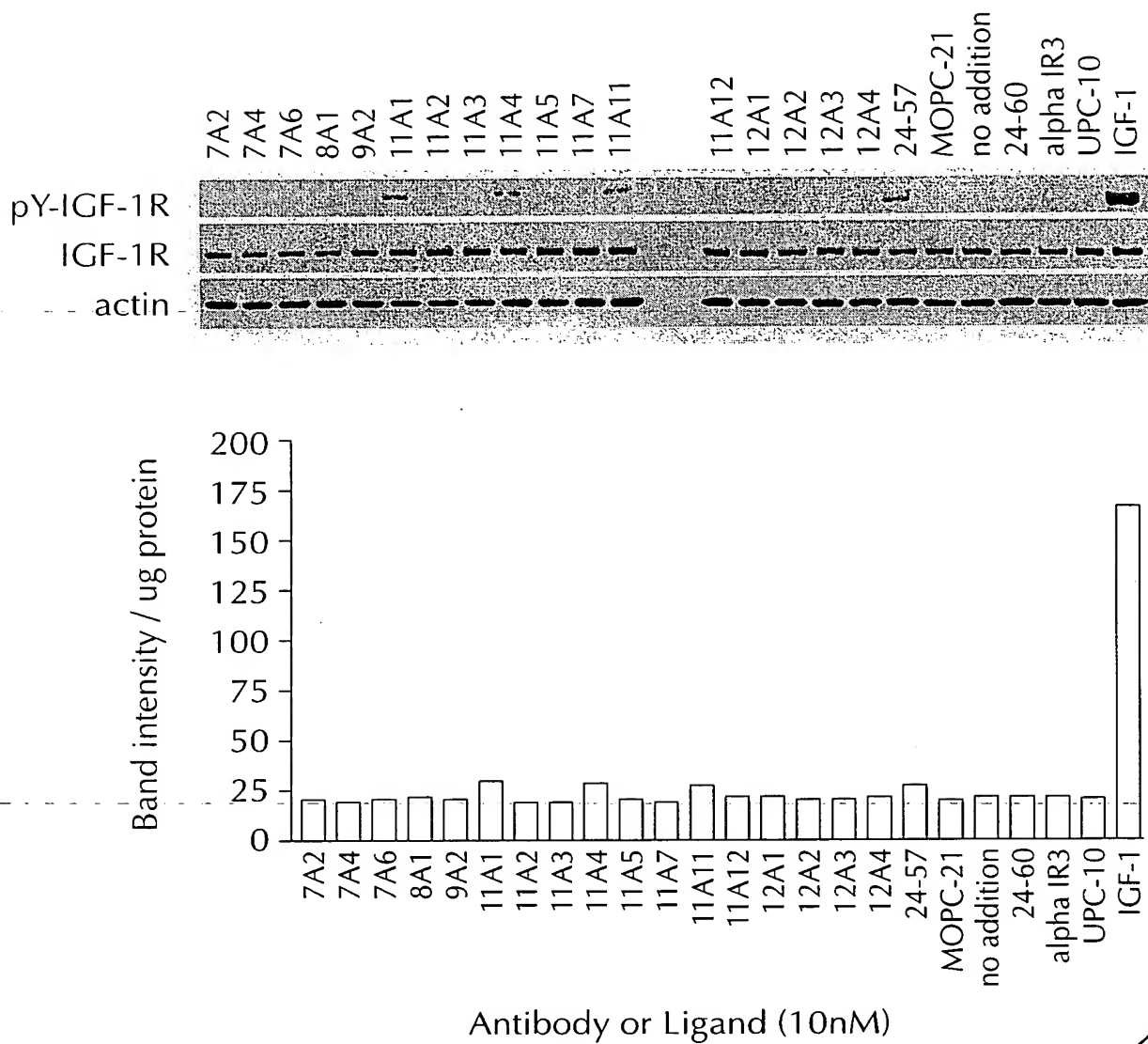


FIG. 8A

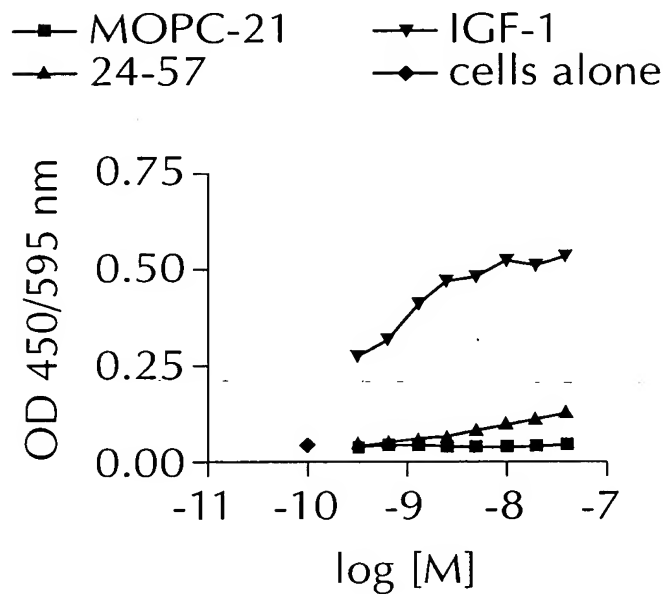


FIG. 8B

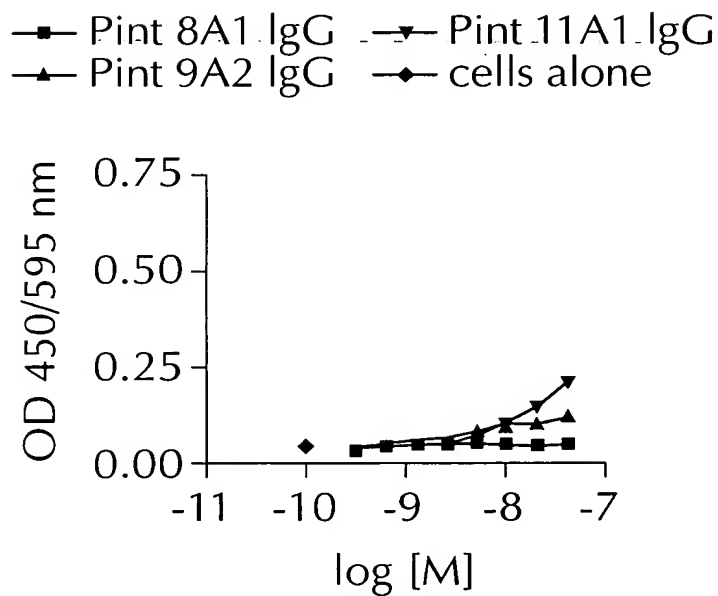


FIG. 8C

■ Pint 7A2 IgG ▼ Pint 7A6 IgG
▲ Pint 7A4 IgG ◆ cells alone

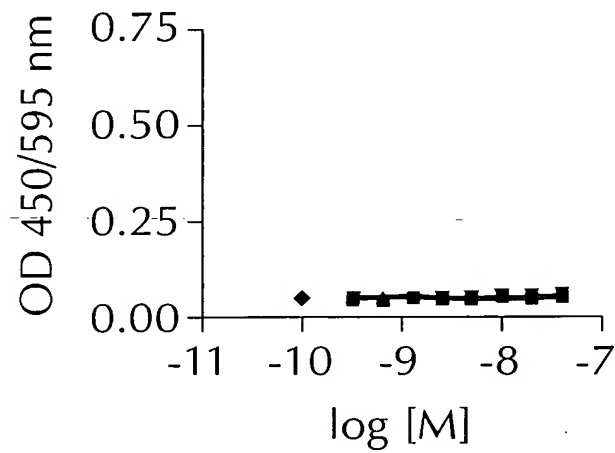


FIG. 8D

■ Pint 11A2 IgG ▼ Pint 11A4 IgG
▲ Pint 11A3 IgG ◆ cells alone

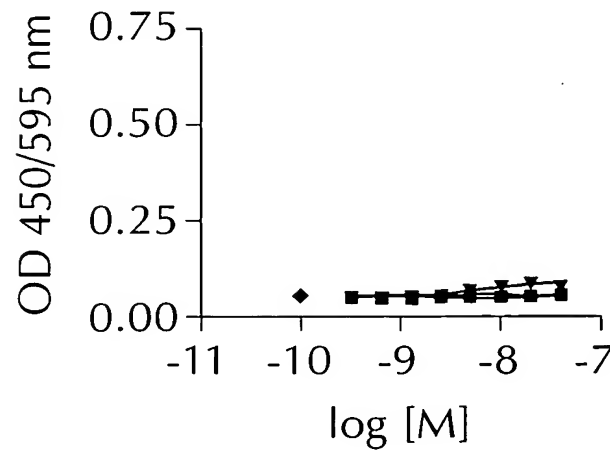


FIG. 9A

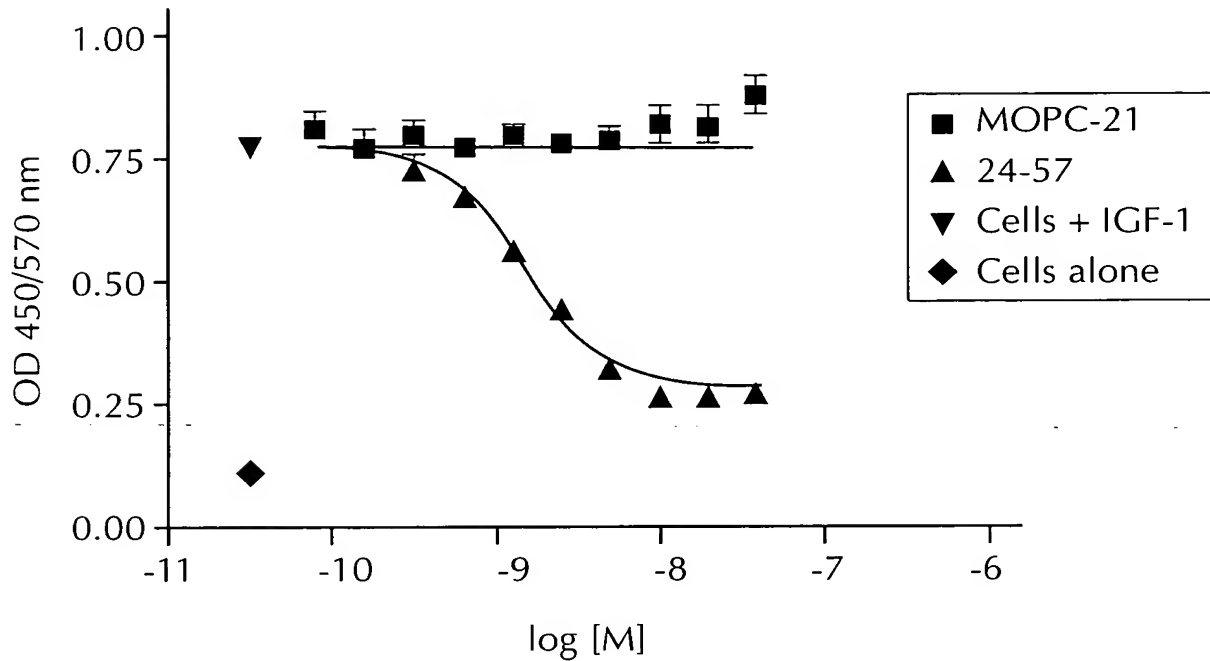


FIG. 9B

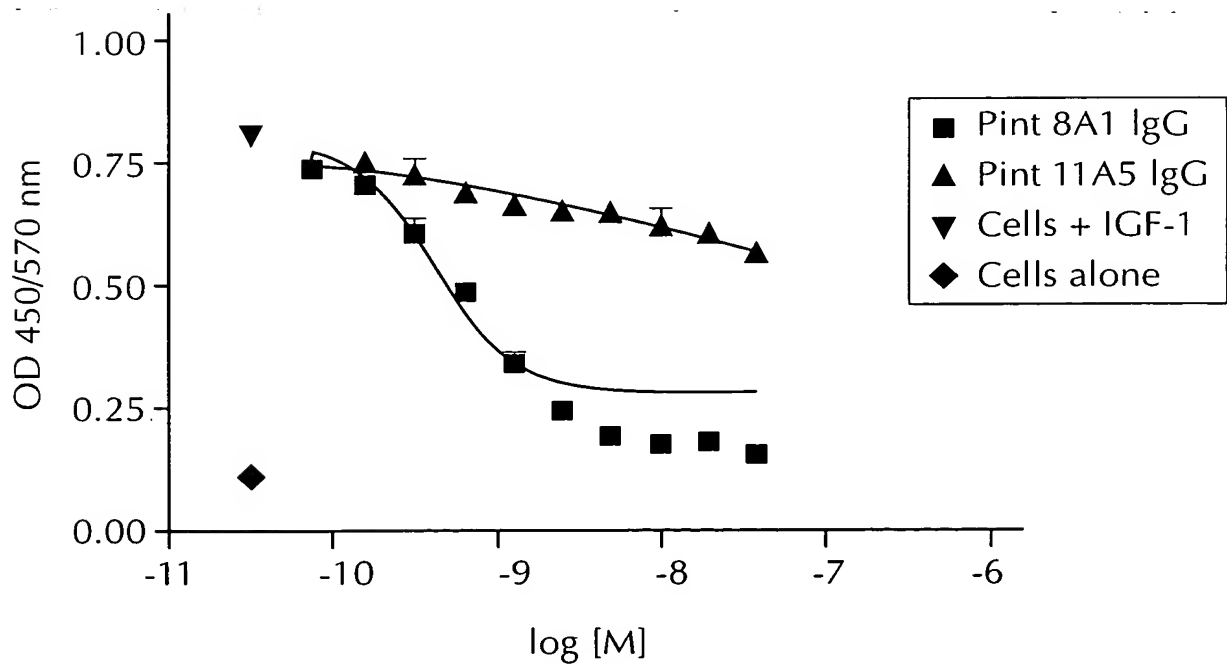


FIG. 9C

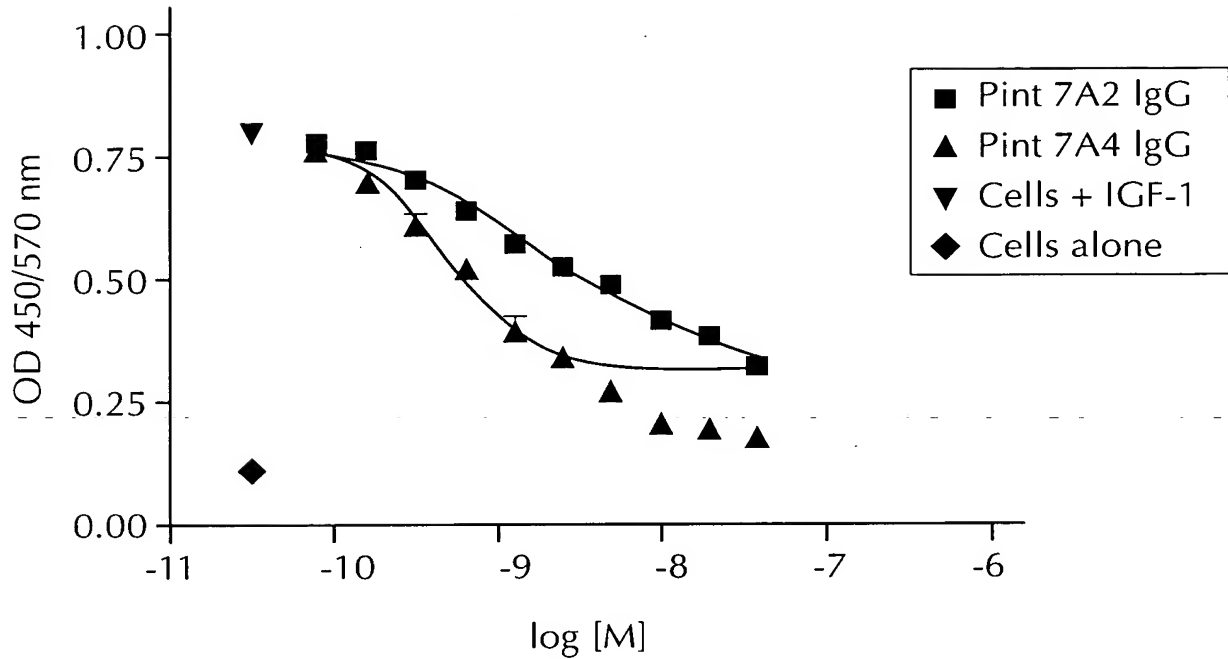


FIG. 9D

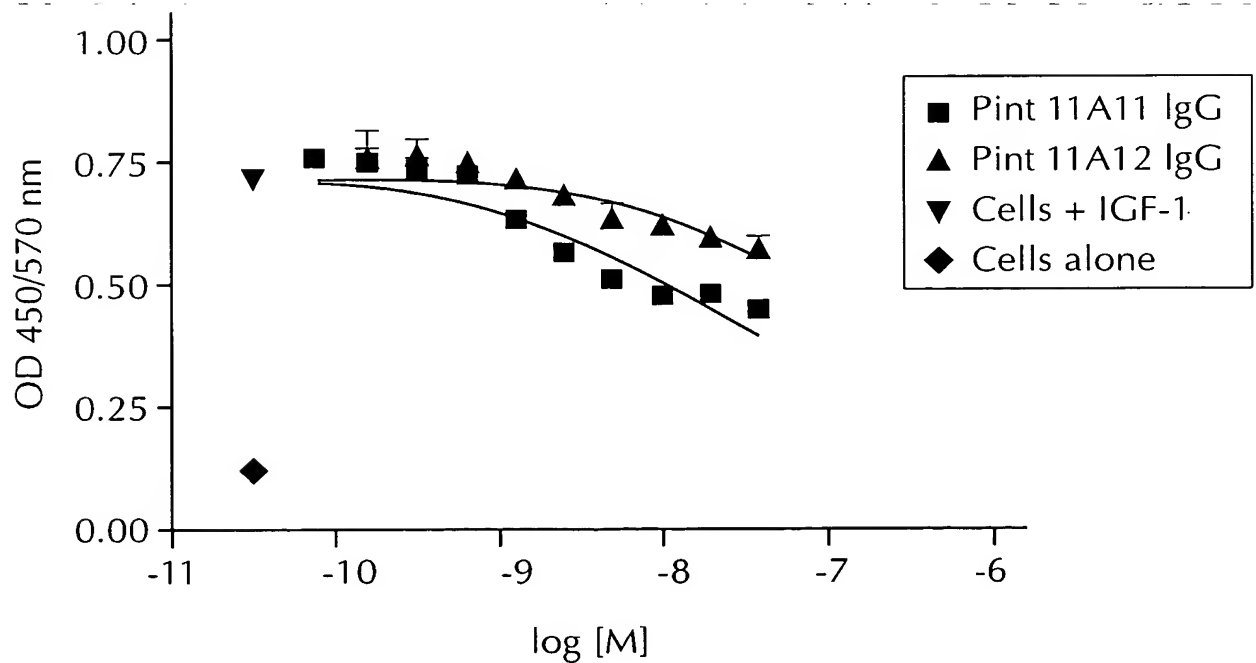


FIG. 10

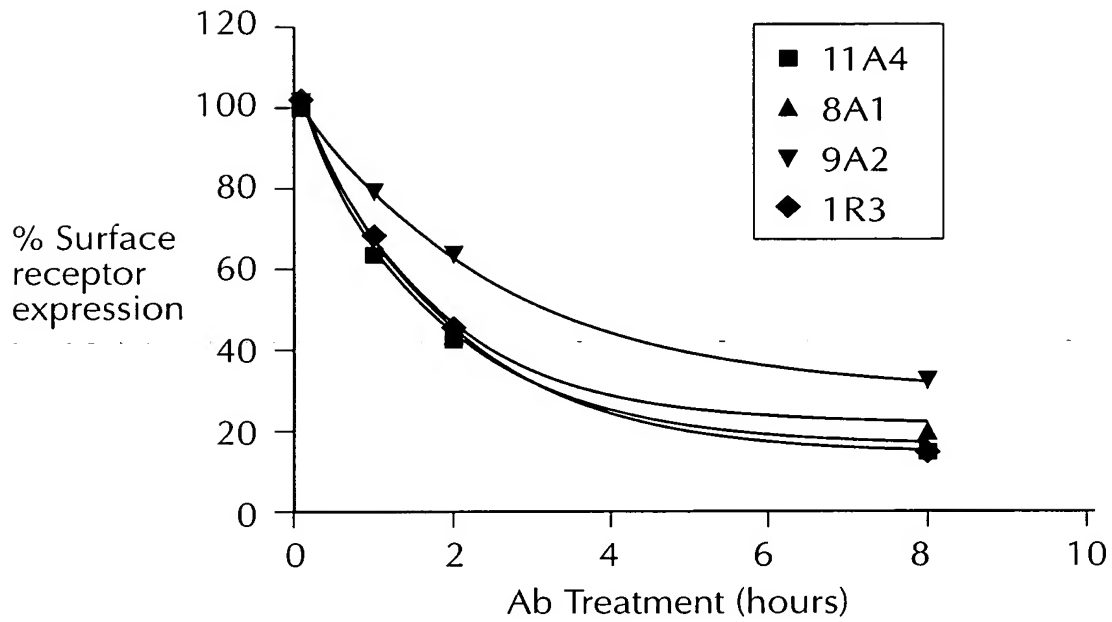


FIG. 13

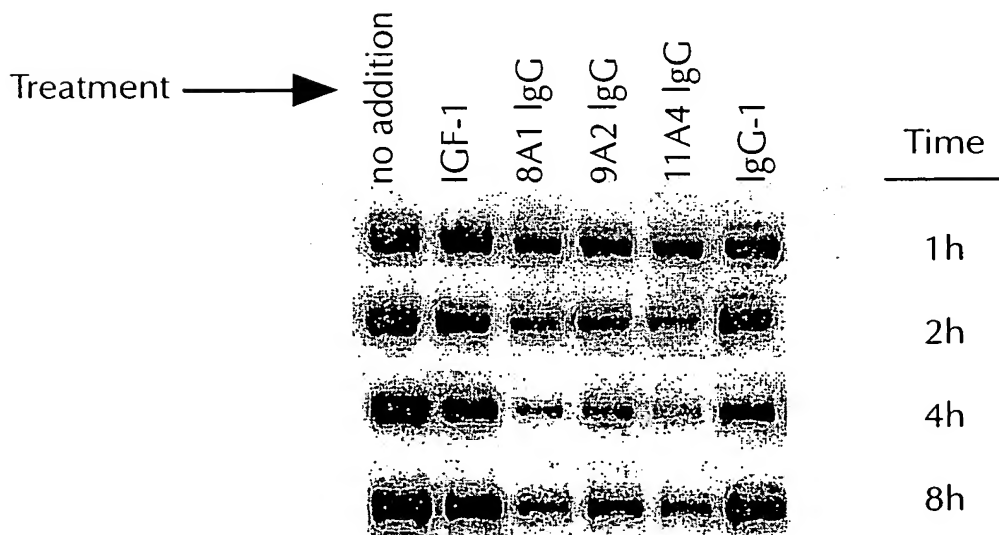


FIG. 11

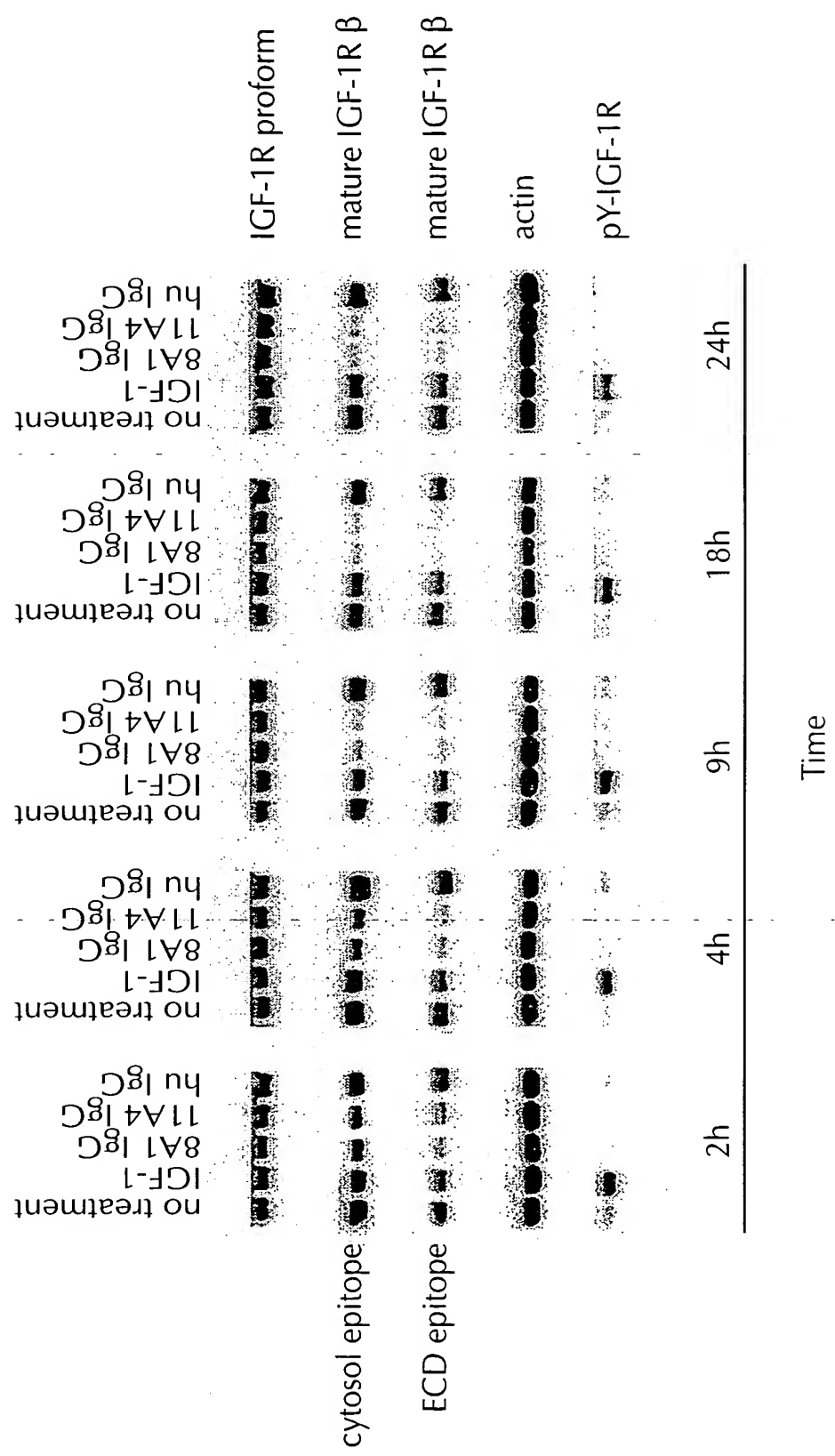


FIG. 12A

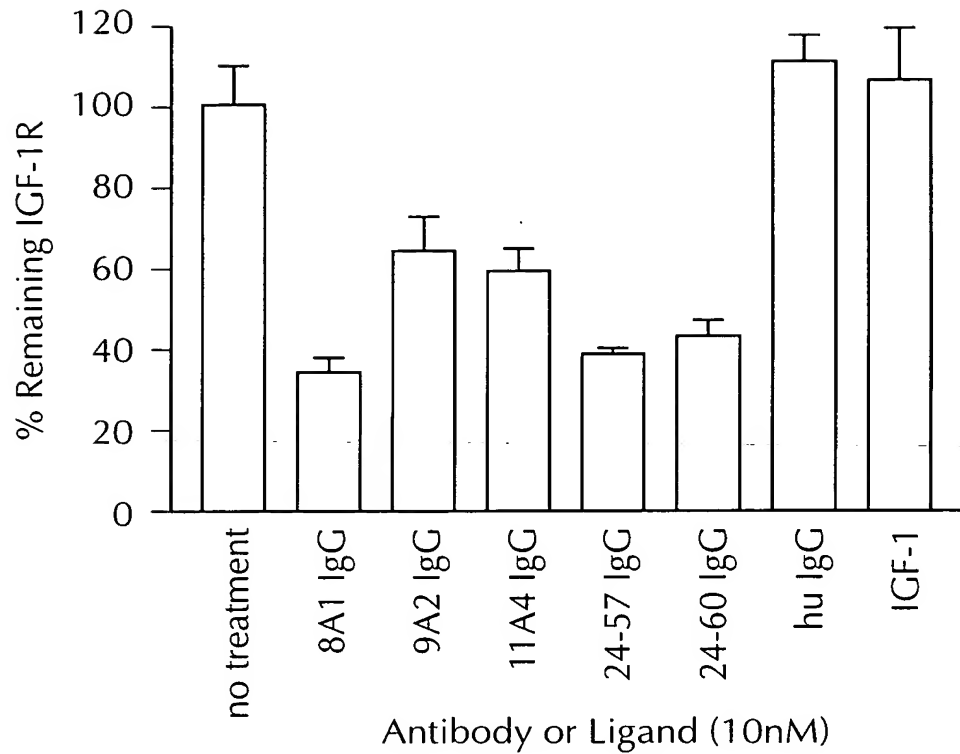


FIG. 12B

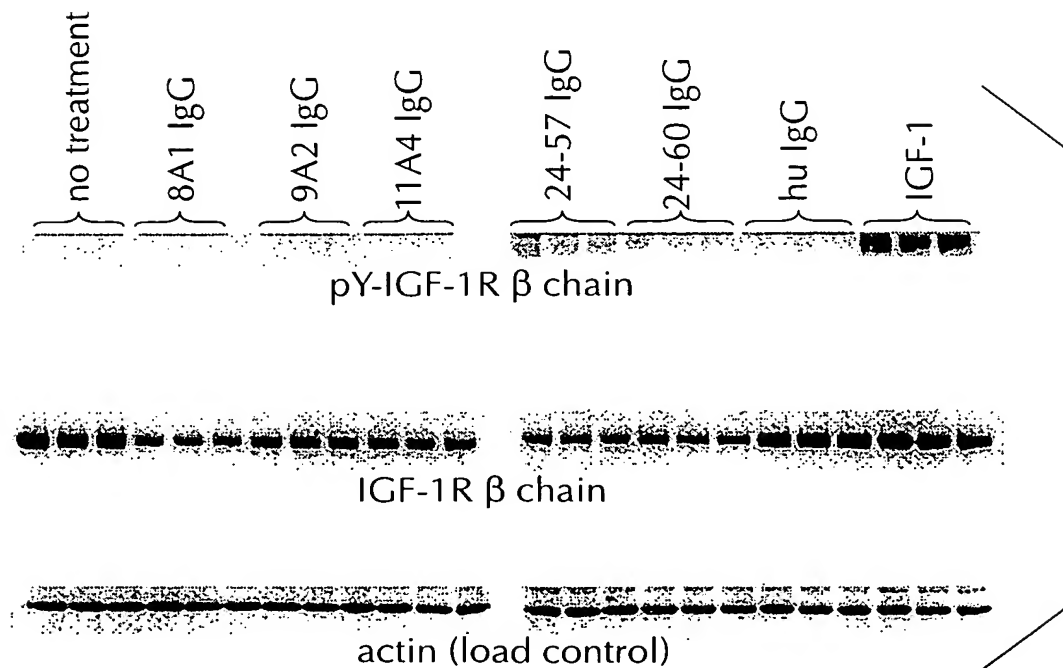


FIG. 14A

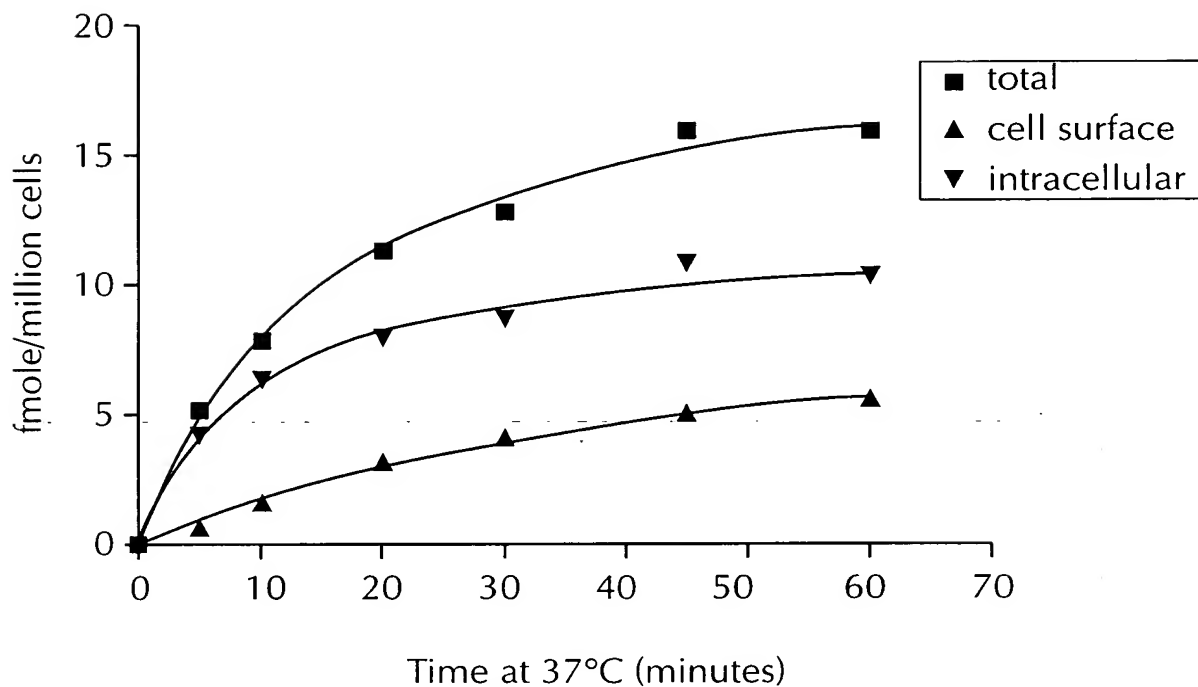


FIG. 14B

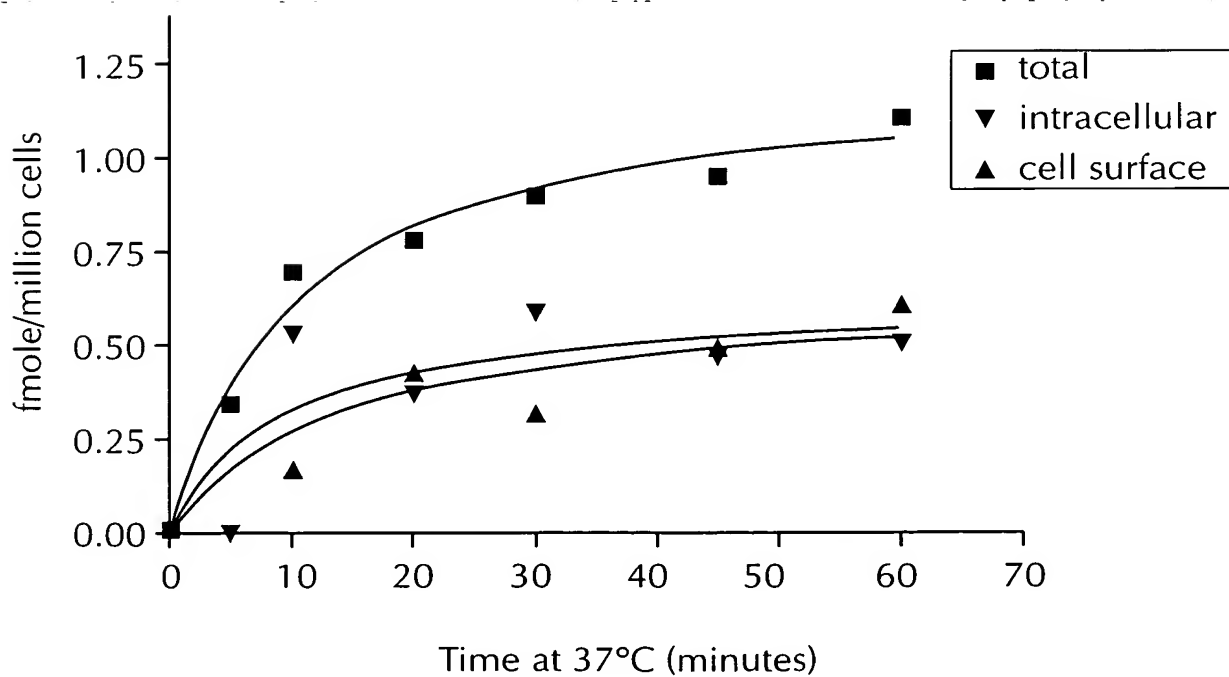


FIG. 14C

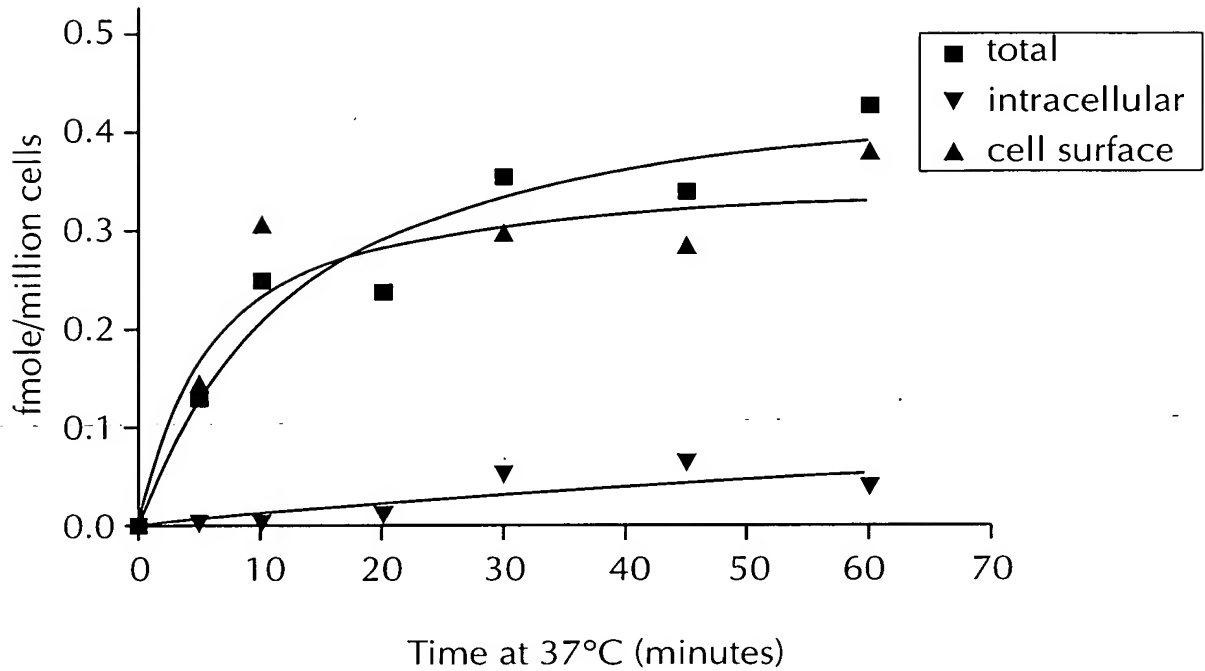


FIG. 14D

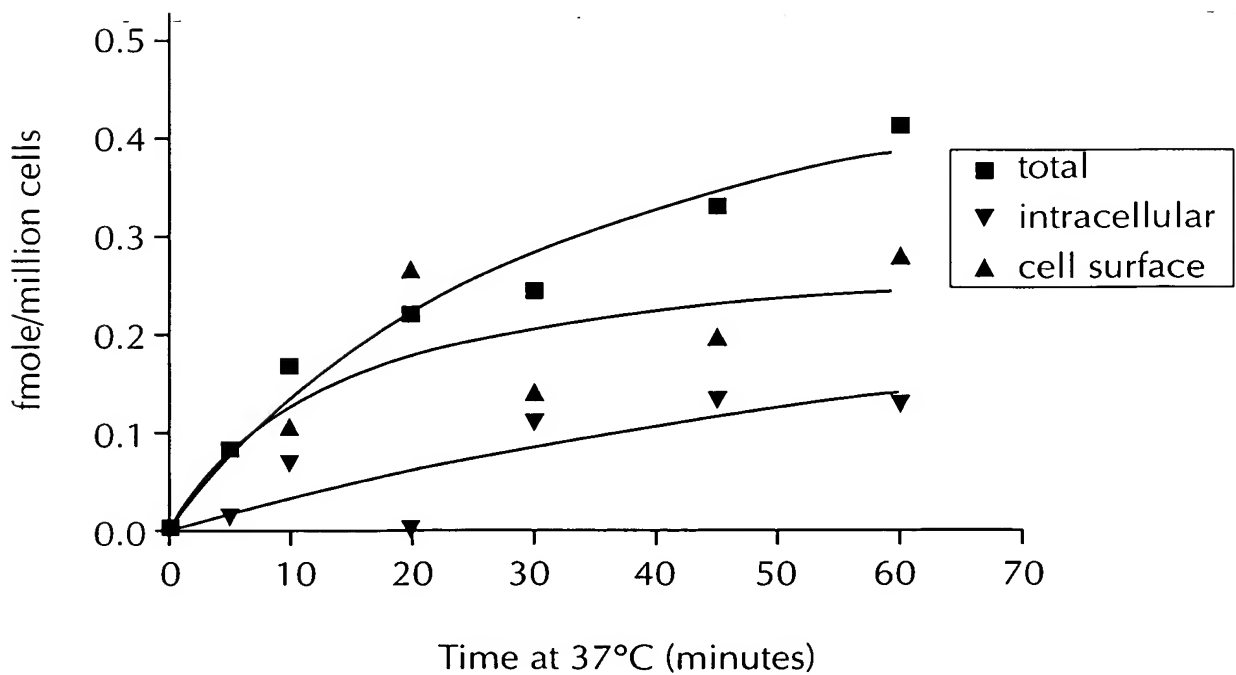


FIG. 15A

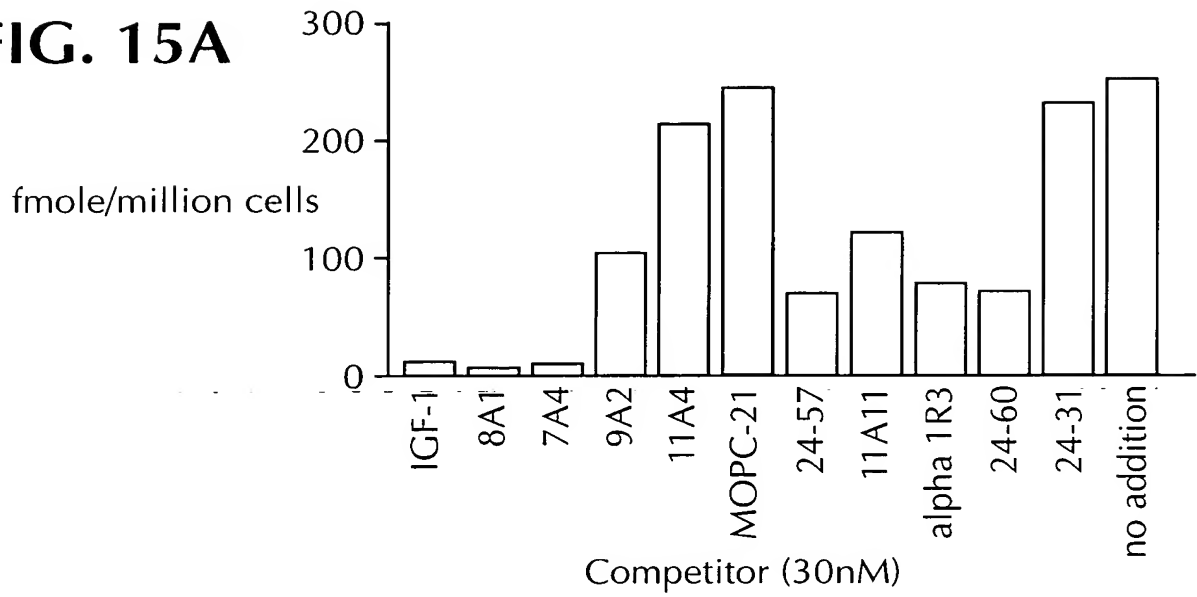


FIG. 15B

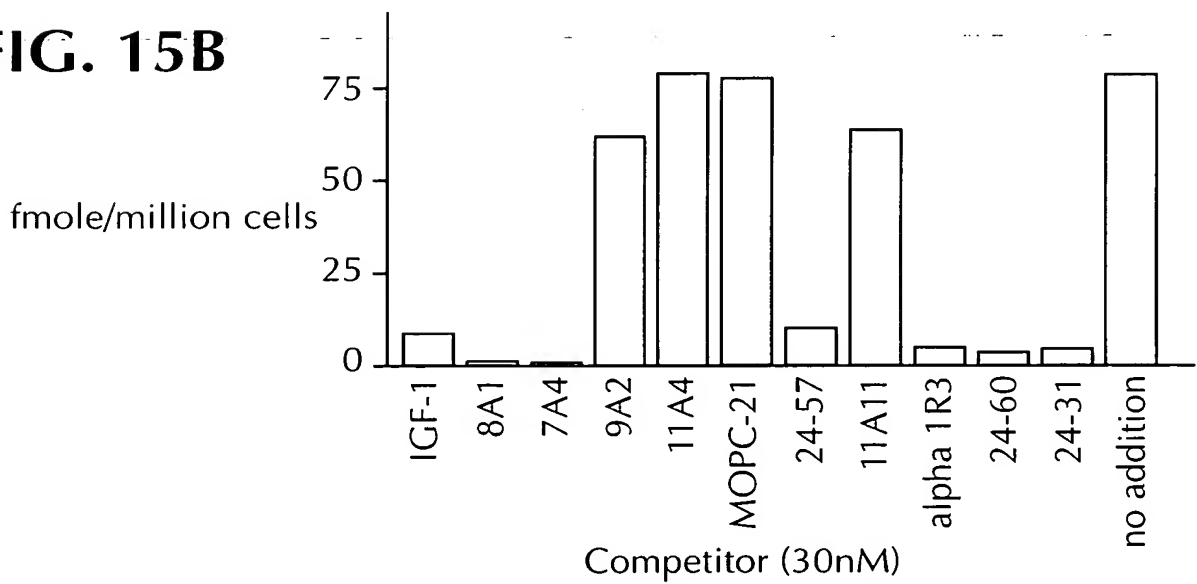


FIG. 15C

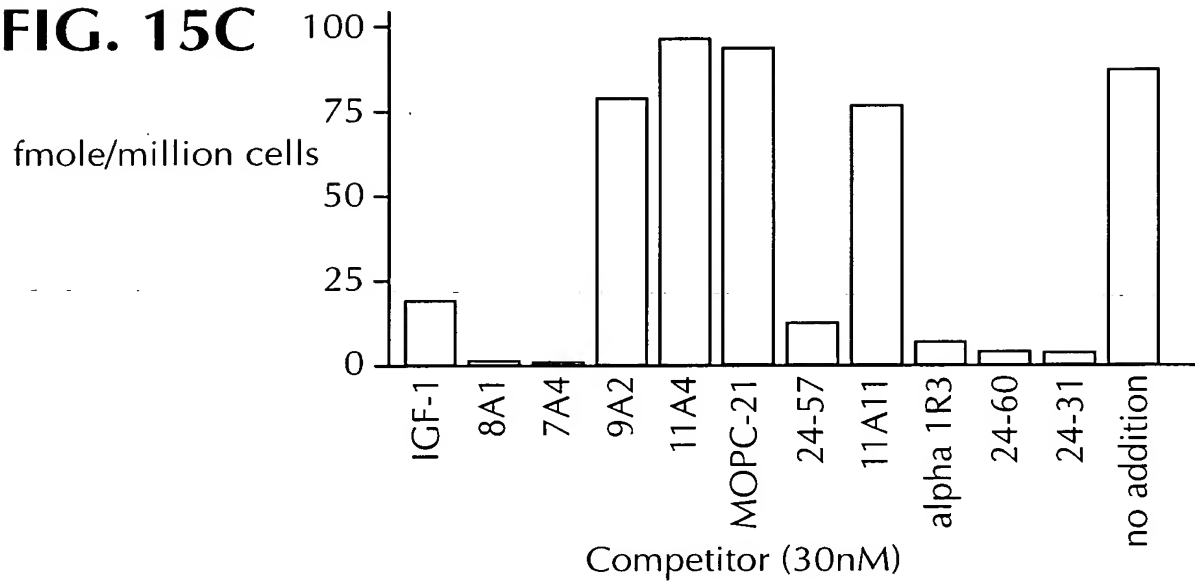


FIG. 15D

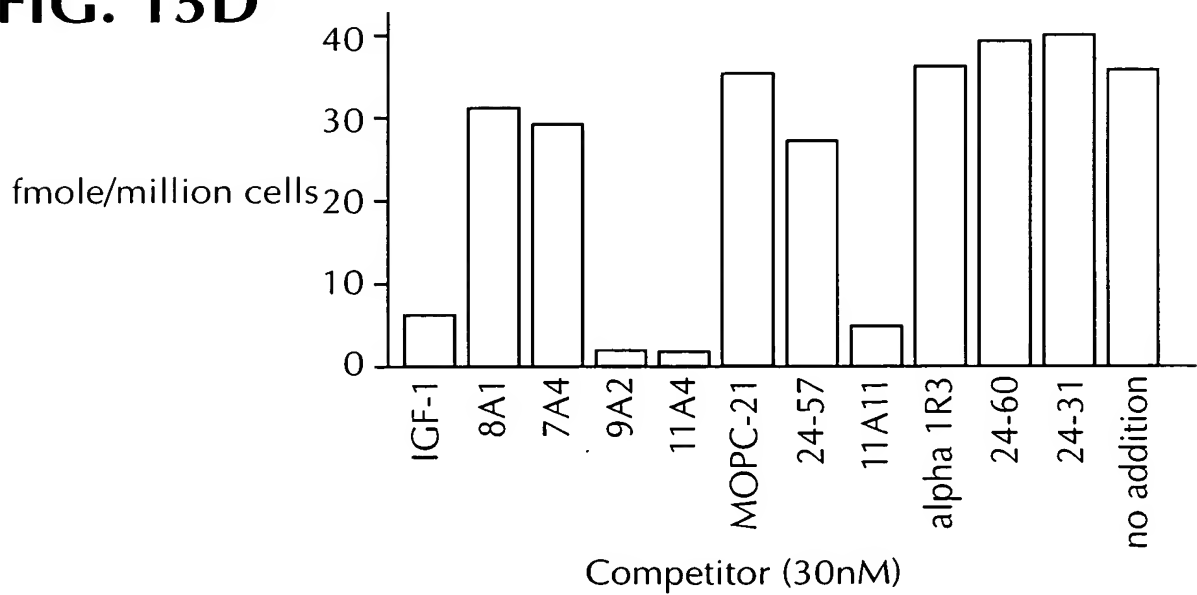


FIG. 15E

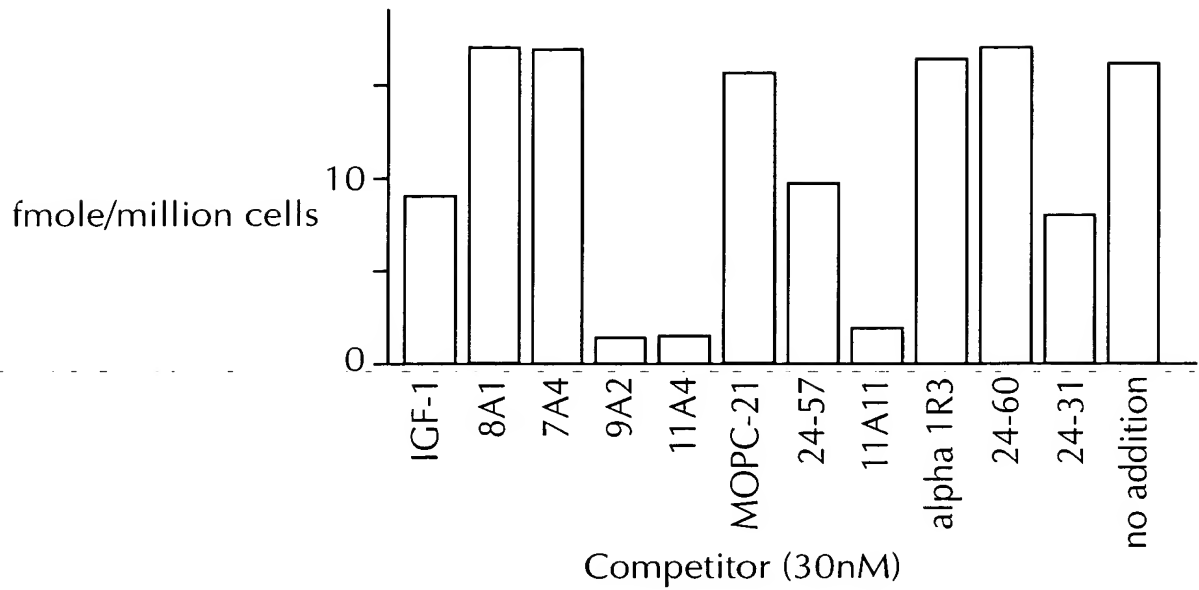


FIG. 15F

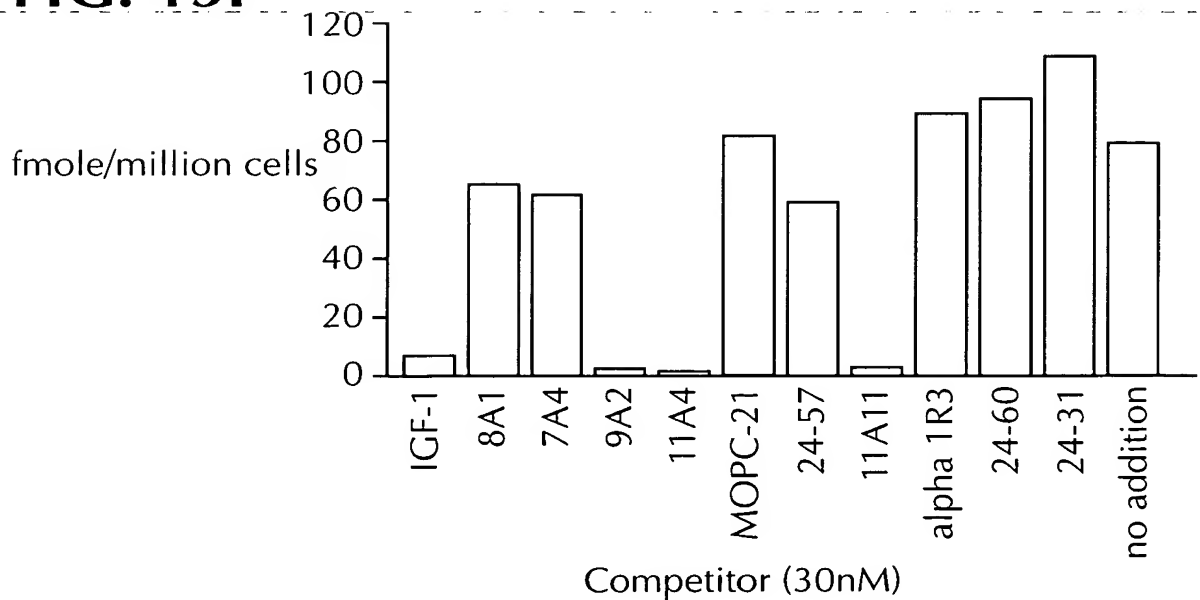


FIG. 16A

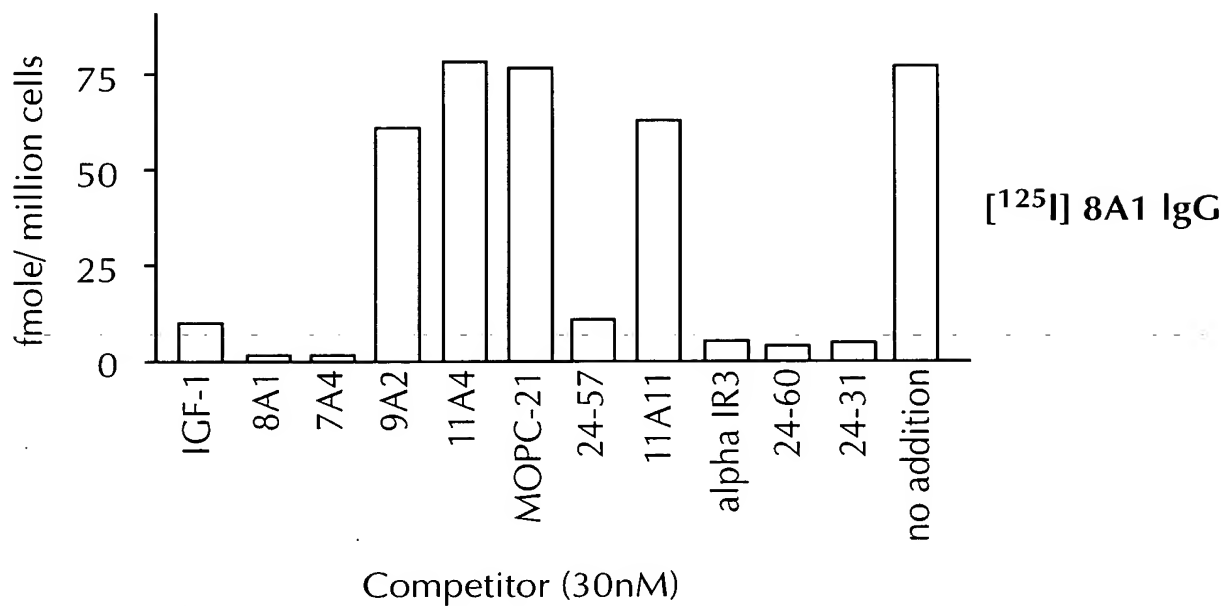


FIG. 16B

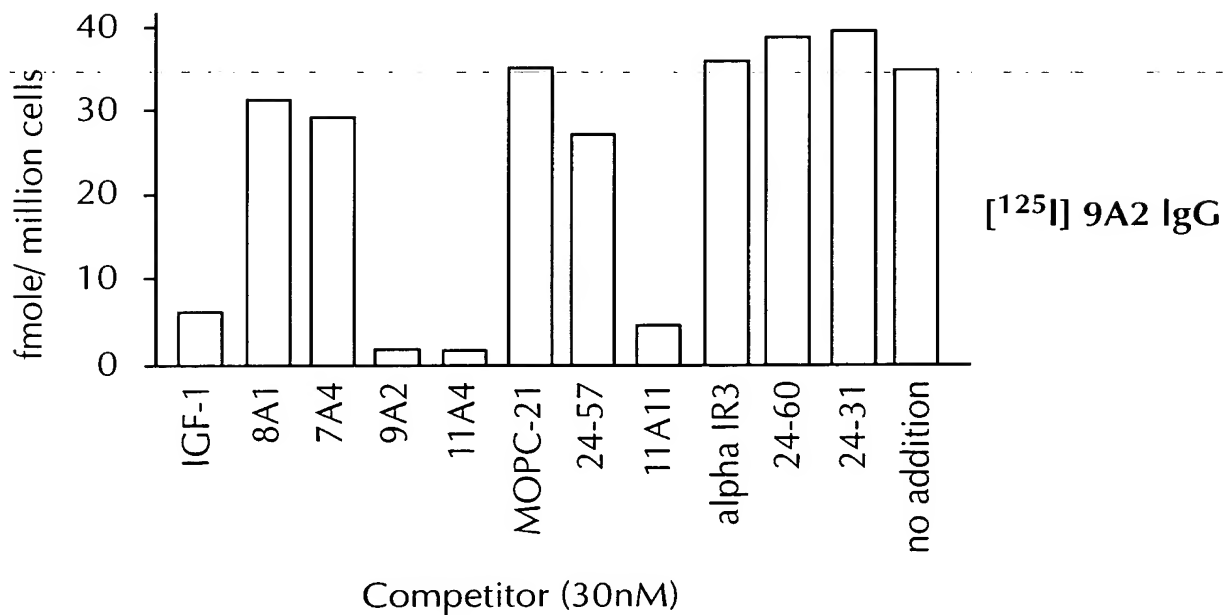


FIG. 16C

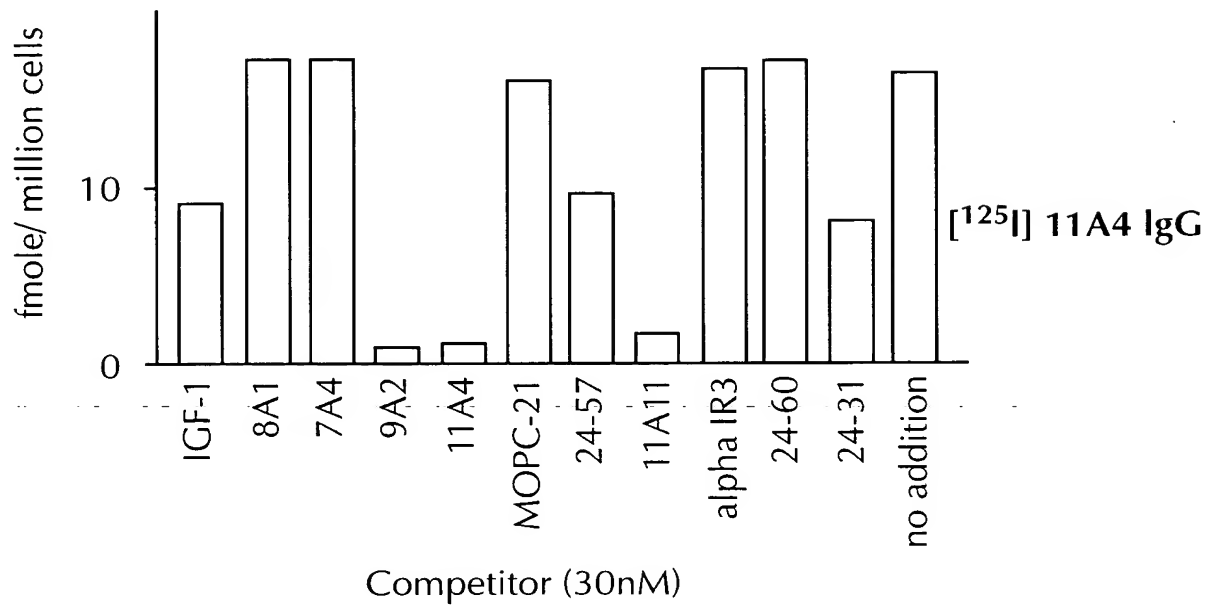


FIG. 17

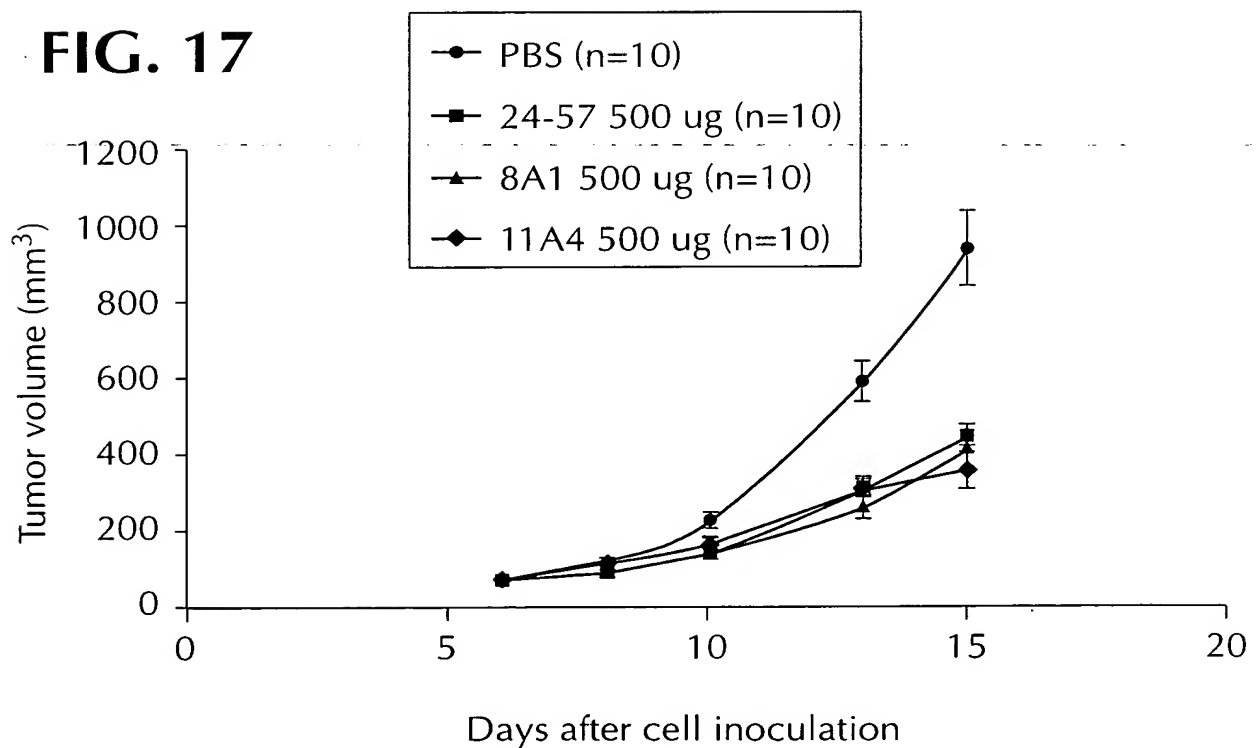


FIG. 18

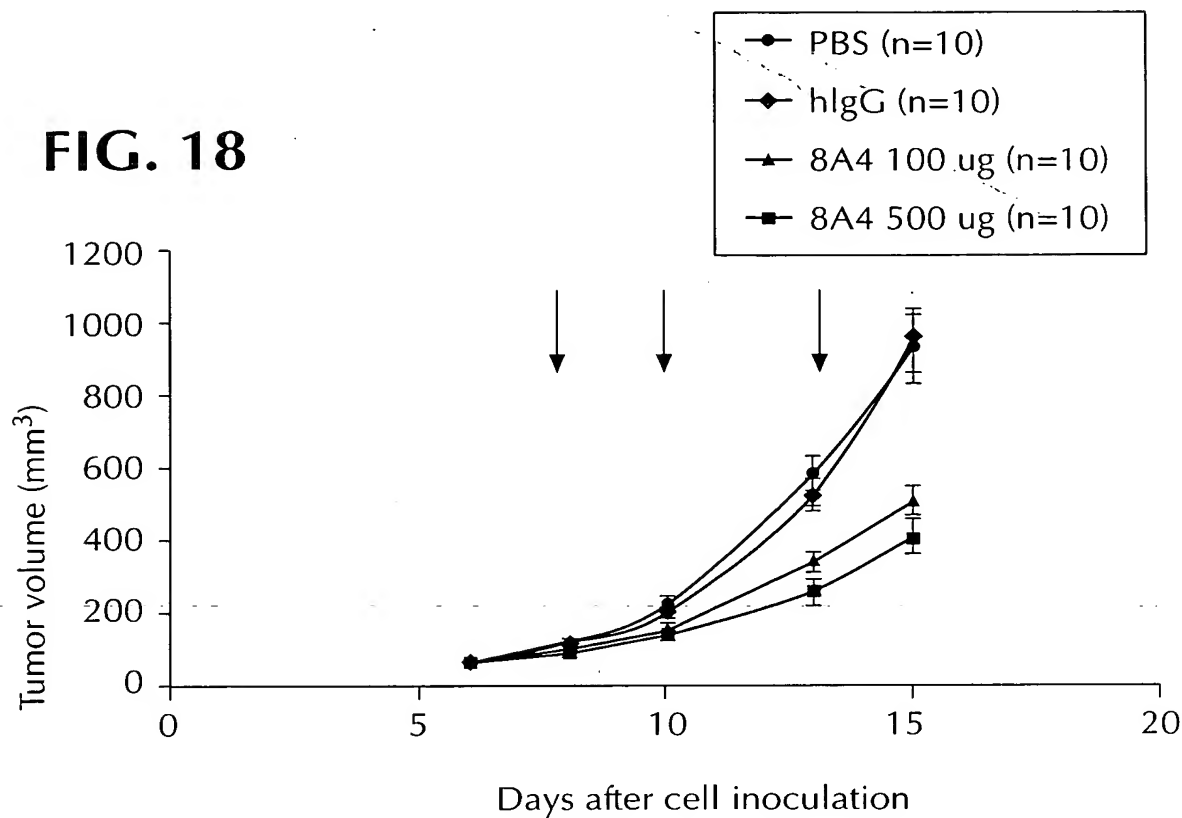


FIG. 19

